REPORT RESUMES

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SOME EFFECTS OF DOGMATISM IN ELEMENTARY SCHOOL PRINCIPALS AND TEACHERS.

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THE HYPOTHESIS THAT RATINGS ON CONGENIALITY AS A COWORKER GIVEN TO TEACHERS WILL BE IN PART A FUNCTION OF THE ORGANIZATIONAL STATUS OF THE RATER WAS TESTED. A SECONDARY PROBLEM WAS TO TEST THE HYPOTHESIS THAT DOGMATIC SUBJECTS MORE THAN NONDOGMATIC SUBJECTS WOULD EXHIBIT COGNITIVE BEHAVIOR WHICH INDICATED (1) GREATER DISTINCTION BETWEEN POSITIVE AND NEGATIVE AUTHORITIES, AS THESE ARE DEFINED BY ROKEACH AND (2) RELIANCE UPON ABSOLUTE AUTHORITY. THE SUBJECTS WERE 714 TEACHERS AND 44 PRINCIPALS IN 44 ELEMENTARY SCHOOLS. SUBJECTS COMPLETED A DOGMATISM SCALE DESIGNED TO MEASURE DECISION-MAKING POWER OF TEACHERS, A SOCIOMETRIC RANKING OF COWORKERS, AND A SEMANTIC DIFFERENTIAL IN WHICH 15 POTENTIAL AUTHORITIES IN THE SCHOOL SYSTEM WERE DESCRIBED ON 15 ADJECTIVE SCALES. ALSO, IMPRESSIONISTIC ACCOUNTS OF THE SCHOOL STAFF IN 26 SCHOOLS WERE WRITTEN BY THE INVESTIGATOR. FINDINGS FOR THE FIRST MAJOR PREDICTION SHOWED A WIDE RANGE OF NEGATIVE, ZERO, AND POSITIVE CORRELATIONS BETWEEN TEACHER DOGMATISM SCORES AND RATINGS RECEIVED FROM PRINCIPALS. FINDINGS FOR THE PREDICTIONS REGARDING DESCRIPTIONS OF AUTHORITIES ON THE SEMANTIC DIFFERENTIAL ESSENTIALLY SHOWED NO DIFFERENCES RELATED TO DOGMATISM SCORES. FINDINGS FOR THE SECOND MAJOR PREDICTION ALSO REVEALED A WIDE RANGE OF CORRELATIONS BETWEEN TEACHER DOGMATISM SCORES AND RATINGS RECEIVED FROM PEERS. THESE RESULTS COULD NOT BE SATISFACTORILY RELATED TO THE "HAPPY" VERSUS "TROUBLED" SCHOOL INTERPRETATION. (RS)

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UNIVERSITY OF CALIFORNIA - LOS ANGELES

Some Effects of Dogmatism in Elementary School Principals and Teachers

A dissertation submitted in partial satisfaction of the
requirements for the degree
Doctor of Education
by
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Final Examination for the Degree Doctor of Education
Monday, August 2, 1965, 1:00 P.M.
Room 348, Moore Hall

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1965

The dissertation of Mary Maxine Bentzen is approved, and
it is acceptable in quality and form
for publication on microfilm:

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ABSTRACT OF THE DISSERTATION

Some Effects of Dogmatism in Elementary School Principals and Teachers

by

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Doctor of Education

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Hypotheses were drawn from Rokeach's conceptualization of the dogmatic personality. The major problem was a test of the hypothesis that ratings on congeniality as a co-worker given to teachers by principals and by peers will be in part a function of the organizational status of the rater. It was predicted 1) that principals would give relatively high ratings to teachers who had high dogmatism scores, and 2) that teachers would give relatively low ratings to teachers who had high dogmatism scores. These predictions were based on the assumption that highly dogmatic teachers tend to behave in an overly submissive manner toward superordinates and in an overbearing manner toward peers. It was further postulated that increased dogmatism in the principal would tend to increase the positive relationship between principal's ratings and teacher dogmatism, and that decrease in the amount of decision-making power held by teachers as a group within the social system of the school would tend to weaken the relationship.

A secondary problem was to test hypotheses that dogmatic subjects more than nondogmatic subjects would exhibit cognitive behavior which indicated 1) greater distinction between positive and negative authorities, as these are defined by Rokeach, and 2) reliance upon absolute authority. Specifically, it was predicted that in responses given on a Semantic Differential 1) dogmatic subjects would differentiate more than nondogmatic subjects between descriptions of positive authorities and negative authorities, and 2) dogmatic subjects would tend to describe all positive authorities alike and all negative authorities alike.

Subjects were 714 teachers and 44 principals in 44 elementary schools. Subjects completed the Dogmatism Scale, a scale designed to measure decision-making power of teachers, a sociometric ranking of co-workers, and a Semantic Differential in which 15 potential authorities in the school system were described on 15 adjective scales. Also, in 26 schools impressionistic accounts of the school staff were written by the investigator.

Findings for the first major prediction showed a wide range of negative, zero and positive correlations between teacher dogmatism scores and ratings received from principals. When the 26 schools for which impressionistic accounts

were available were rated on a "happy-troubled" scale, these ratings were found to be related to the correlations in such a manner that negative correlations were associated with "happy" schools, positive correlations with "troubled" schools. The interpretation offered was that in "troubled" schools formal status distinctions operated to create conditions necessary to elicite submissive behavior toward superordinates from dogmatic teachers, while in "happy" schools these distinctions deteriorated. No effect of the amount of teachers' decision-making power on these correlations was discovered. An effect of principal's dogmatism appeared, opposite to the direction predicted. Findings for the second major prediction also revealed a wide range of correlations between teacher dogmatism scores and ratings received from peers. These results could not be satisfactorily related to the "happy-troubled" school interpretation.

Findings for the predictions regarding descriptions of authorities on the Semantic Differential essentially showed no differences related to dogmatism scores. It was felt that certain inadequacies in measurement techniques might have obscured information.

CHAPTER I

STATEMENT OF PROBLEM

Probably the most widely accepted idea in current research on human interaction processes is that behavior results from some kind of transaction between personal factors and situational factors.[1] The interrelationships of these two sets of determinants is an especially important area for educational research, since few professions rely as heavily as does education upon an understanding of interaction processes. This study investigates certain relationships between person and situation that may influence the role behavior of elementary school teachers.[2] These relationships will be treated both on a theoretical level and as they may apply to the practical problem of teacher evaluation.

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[1] See Neil J. Smelser and William T. Smelser, Personality and social systems (New York: John Wiley and Sons, Inc., 1963), for a general statement of this position. An example of its application to the study of a particular kind of behavior can be seen in Bernard M. Bass. Conformity, deviation and general theory of interpersonal behavior. In Irwin A. Berg and Bernard M. Bass (Eds.), Conformity and deviation (New York: Harper and Brothers, 1961).

[2] The terms "role behavior" and "role" are employed to make the same distinction that has been made by many other writers. Thus, "role" refers to a pattern of behavior expected of a person occupying a particular status; "role behavior" refers to the way a role is actually performed in a specific situation.

The study falls into two major parts: relationships between a specific type of personality structure and overt teacher behavior in two kinds of interaction situations; and secondarily, relationships between the same type of personality structure and certain relevant cognitive behaviors.

1. Relationships Between Personality and Status-Linked Behavior of Teachers

One way to begin inquiry into the joint effects of personal and situational factors would be to ask what characteristics of person and what characteristics of situation are implied by the definition of the elementary school teacher role, thus directing or limiting possible role behavior. As far as personal characteristics are concerned, the picture is cloudy. First, there seems to be little agreement on one "ideal teacher" image.[3] Furthermore, there is no conclusive evidence that any particular type of person is necessary for the attainment of any desired teacher image.[4] Thus, it is hard to identify across-the-board personal requirements which are built into the concept of the elementary teacher role.

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[3] For a brief discussion of this problem: Jacob W. Getzels and Philip W. Jackson, Research on the variable teacher: some comments. *Sch. Rev.*, 1960, *68*, 450-461; Philip E. Vernon, The psychological traits of teachers, *The Yearbook of Education* (London: Evans Brothers, Ltd. in association with the University of London Institute of Education and Teachers' College, Columbia University, New York, 1953).

Situational factors which help to specify this teacher role are somewhat clearer. Although the teacher's situation certainly varies from one elementary school to another, the role is generally played within two simultaneous sets of strikingly contrasting conditions. In the classroom, the elementary school teacher takes the part of almost absolute authority. Within the social system of the whole school, the same teacher is subordinated to administrative authority, which may be close to absolute in nature. True, teachers may delegate varying amounts of authority in the classroom, and administration may allow more or less autonomy to the individual teacher. The basic design of the elementary school organization, however, calls for the teacher *qua* teacher to behave both as top dog and, at the same time, as low man on another totem pole.[5]

---

[4] A few examples of the numerous studies which have attempted to clarify such relationships are: Anthony LaBue, Teachers' classroom attitudes, *J. teacher Educ.*, December, 1959, 433-434; John U. Michaelis, Prediction of success in student teaching from personality and attitude inventories, *University of California Publications in Education*, 1954, *11*, No. 6; William Rabinowitz and I. Rosenbrum, A failure in the prediction of pupil-teacher rapport, *J. educ. Psychol.*, 1958, *49*, 93-98.

One cannot help but wonder how different people react to these dissimilar directives. Leaving aside the question of "best" or "necessary" personal characteristics, it might be possible to generate fruitful hypotheses by considering ways in which an imaginary person would respond. Let us so consider the theoretical personality type generally referred to as "authoritarian." The specific conceptualization employed here is that of the dogmatic personality, as it has been developed by Milton Rokeach.[6]

On a common sense level, one may expect that a person's overt behavior toward peers and subordinates will differ in some respects from his behavior toward superordinates, but the concept of dogmatism suggests certain specific differences, which, if true, have interesting implications for educators. The nondogmatic personality presumably tends to maintain a relatively egalitarian posture with all interaction partners. The dogmatic personality, like the "authoritarian personality,"[7] is assumed to be extremely sensitive to the threat represented by the presence of an authority figure and to react to it by adopting respectful, overly submissive behavior. This same dogmatic person, however, in the company of peers or subordinates, is presumably characterized by his domineering stance and his severe rejection of those who disagree with his beliefs. Translated into the school setting, this could mean that the principal, or any other authority figure, may perceive as exceptionally cooperative and adaptable certain (dogmatic) teachers who are perceived in a diametrically opposite way by pupils and other teachers.

---

[5] The mere holding of an intermediate position within the hierarchy of a formal organization is, of course, not unique to the elementary school teacher. What does set this teacher somewhat apart is the fact that his subordinates are children. On the one hand, this results in an unusual amount of authority over subordinates, since the teacher can draw on his culturally supported status of adult vis-a-vis children as well as on his organizational status of teacher. On the other hand, the teacher is the lowest adult in professional elementary education hierarchy.

[6] The most complete description is in Milton Rokeach, The open and closed mind (New York: Basic Books, Inc., 1960).

If such a state of affairs does exist, it is relevant to the notoriously unresolved problem of the evaluation of teachers. Teachers are typically rated by superordinates and may be promoted in the school system largely on the basis of these evaluations.[8] Yet it has long been known that these ratings by superordinates do not usually correlate highly with ratings of teachers by students or by peers. No doubt there are many facets to this lack of agreement, but one may be simply that the different kinds of ratings in some cases reflect what are in truth very different kinds of teacher behavior. That is, while the nondogmatic teacher's behavior does not change much in the presence of an authority figure, the behavior of the dogmatic teacher undergoes a radical change. This leads to a question basic to the whole notion of teacher rating: to what extent is the behavior sample on which a rating is based a representative sample of the teacher's behavior?

---

[7] T. W. Adorno, et al., The authoritarian personality (New York: John Wiley and Sons, Inc., Science Editions [paper], 1964), 2 vols.

[8] While there seems to be some agreement that the only ultimately valid criteria for evaluation of teacher effectiveness are to be found in desirable changes in pupil behavior, there is also considerable agreement that inadequate measuring instruments now preclude extensive use of these criteria. Evaluation of teachers, therefore, in general rests on some other basis. Some writers have suggested that research on teacher effectiveness should focus not on teacher behavior per se, but on the expectations of

The question is too broad to be encompassed in a single study, but the line of reasoning developed so far points to a more limited, yet related question: are there some conditions under which the character of the behavior sample available to a rater of teachers may be largely a function of the organizational status of the rater? It is this question which expresses the theoretical basis for the first part of the present study.

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those who will rate teachers. Thus, Fred N. Kerlinger stresses the importance of the philosophical position of the rater (Educational attitudes and perceptions of teachers: suggestions for teacher effectiveness research, Sch. Rev., Spring, 1963, 1-11). A plan to implement expectation-oriented research is described in A. Garth Sorenson, T. R. Husek and Constance Yu, Divergent concepts of teacher role, J. educ. Psychol., 1963, 54, 287-294.

Within this frame of reference, the specific question asked here is: does dogmatic personality structure in a teacher provide one condition under which submissive responses characterize behavior toward superordinates, while domineering responses characterize behavior toward peers?[9]

Given a measurement of dogmatism, it should be possible to investigate this question by asking principals and teachers to indicate which teachers they find easy to work with and which ones they find hard to work with. That is, if principals are asked to rank their teachers according to the degree to which they find them congenial co-workers, the concept of dogmatism suggests that dogmatic teachers will tend to be ranked as relatively easy to work with because of their deferential behavior toward the principal.[10]

---

[9] An empirical test of whether or not the sample of dogmatic teacher behavior available to the principal is representative really requires data from three sorts of interaction situations--dogmatic teachers' behavior with superordinates, dogmatic teachers' behavior with peers and dogmatic teachers' behavior with subordinates. This study is confined to data concerning two of the three interaction settings. It is hoped that data on the effect of dogmatism in the classroom can be obtained later. There is a considerable body of research which indicates that variables commonly associated with general authoritarianism may indeed be relevant to teachers' classroom behavior and to the effects of that behavior on pupils.

[10] If a principal rates a teacher as relatively easy to work with, it does not necessarily follow that he would give that teacher an overall high rating. Though it does seem altogether likely that they have some influence, we do not know what weight is carried in a general teacher rating by such evaluations as "cooperative," "adaptable," "congenial." Nor is any value judgment intended here as

If, on the other hand, teachers rank one another on the same criterion, dogmatic teachers should be ranked as relatively difficult to work with because of their overbearing behavior toward peers. Such demonstrable relationships between these rankings and teacher dogmatism could not, of course, in themselves prove the cause of the different rankings, but they would add to the plausibility of the inferences drawn about the behavior of a dogmatic personality in two different interaction situations.[11]

To attempt to demonstrate empirically a positive relationship between teacher dogmatism and ranking by principals, it becomes necessary to consider other variables which might obscure, modify or limit such a relationship. The relationship is premised on certain behaviors; these behaviors are, in all likelihood, influenced by more factors than a single personal characteristic (teacher person-

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to what weight they should carry. This type of rating is used in this study simply because it appears to be a convenient tool for getting at the problem of biased behavior samples.

[11] The use of the same criterion for choice by both superordinates and peers is a crucial point. Some reports have suggested that high ratings from superordinates may be given to those who are not popular with peers, but when the ratings are based on different criteria, it is hard to compare behavior toward superordinates with behavior toward peers. For examples see Edgar F. Borgatta, Analysis of social interaction and sociometric perception, in J. L. Moreno (Ed.), _The sociometry reader_ (Glencoe, Ill.: The Free Press of Glencoe, 1960); Robert E. Stoltz, Factors in supervisors' perceptions of physical science research personnel, _J. appl. Psychol_., 1959, _43_, 256-258.

ality) and a single situational characteristic (organizational status of the rater).[12] Though the number of relevant variables is probably quite large, only two other possible sources of variation will be taken into account in this study.

These two potentially relevant variables can best be seen in terms of two major assumptions underlying the predicted relationship. These assumptions and their associated variables are discussed below.

1) Assumption: Highly dogmatic teachers, unlike nondogmatic teachers, will be extremely sensitive to the presence of an authority figure, and will respond in an overly submissive manner.

It is conceivable that in certain situations pronounced acquiescence to superordinates is not primarily a function of personality. Characteristics of the school, considered as a social system, could press for such a response to superordinates regardless of individual predilections. This conclusion can be reached by extending the notion of threat which presumably underlies the dogmatic person's oversubmissiveness to any authority figure. The dogmatic person is extremely sensitive to threat and perceives it, albeit sometimes erroneously, in any superordinate, simply by virtue of that superordinate's higher organizational status. He sees himself as powerless against the superordinate. But what if the power structure of the organization does indeed allot very little power to a given status? Then the power discrepancy and resultant threat from superordinates may be apparent to all members of the relatively powerless status, whatever their personality types. So, a school social system in which the teacher group is relatively powerless may act to suppress evidence of individual differences in predisposition to perceive threat and to be submissive to an authority figure. In such a case, dogmatic teachers continue their characteristic oversubmissiveness toward the authority figure (the principal), and the nondogmatic teachers follow suit because they deem it necessary for their occupational futures to--in the phrasing of a bit of military wisdom--"find out what the s.o.b. wants and give it to him." Powerlessness then becomes another variable to be considered. The condition of powerlessness attached to teacher status per se should limit a relationship which might otherwise be found between dogmatic personality and high rank on a principal's list of congenial co-workers. If, all teachers kow-tow to the principal, then, for purposes of this study, the behavioral distinction between dogmatic and nondogmatic teachers has disappeared. It is no longer reasonable to assume that, because of their oversubmissive behavior, dogmatic teachers will receive higher ranks than nondogmatic teachers on a principal's list of congenial co-workers.

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[12] Yinger has recently emphasized the need to develop research which somehow takes simultaneous account of an adequate range of individual tendencies and situational influences. (J. Milton Yinger, Research implications of a field view of personality, Amer. J. Sociol., 1963, 68, 580-592.)

2) Assumption: The principal will respond to submissive behavior on the part of a teacher by ranking that teacher as easy to get along with.

While it seems reasonable to suppose that authority figures, by and large, will tend to perceive as most congenial those subordinates who quickly go along with their wishes, it is also reasonable to look for differences in the importance placed by superordinates on this kind of behavior. The conceptualization of the dogmatic personality implies that dogmatism in the superordinate is associated with a preference for submissive behavior in his subordinates. The more dogmatic the superordinate, the more he presumably values the "yes-man." Degree of dogmatism in the principal, then, can be treated as a second modifying condition for the hypothesized relationship between dogmatism in a teacher and ranking on congeniality by a principal. The expectation is that this relationship will be stronger for highly dogmatic principals than it will be for nondogmatic principals. The dogmatic principal is more apt than is the nondogmatic principal to assign high ranks to submissive teachers, low ranks to those who give him back-talk.

These two potentially modifying conditions--powerlessness of teachers and dogmatism of principal--can be arranged in four combinations (Fig. 1).

FIGURE 1

FOUR HYPOTHETICAL SCHOOL ENVIRONMENTS

Principal's Dogmatism

	Relatively Autonomous (A)	Relatively Powerless (P)
Dogmatic (D)	AD	PD
Nondogmatic (N)	AN	PN

Powerlessness of Teacher Status

These four combinations may be thought of as describing four theoretically possible school environments. At this point, it should be noted that environments AD and PN may not exist. Powerlessness of teachers and dogmatism of principal may not be independent dimensions. There are not, however, clear indications from theory or from research as to how much dogmatic personality may influence supervisory style, how supervisory style interacts with structural components to effect power of subordinates, etc. Lacking answers to these relevant questions, all four logically possible cells will be kept until the empirical evidence is in.

The question then becomes: what is the relative strength, in each of these environments, of the hypothesized positive relationship between teacher's dogmatism and principal's ranking on congeniality? If the main effect of powerlessness is to minimize individual differences in outward submissiveness to the authority figures and if the important effect of principal's dogmatism is to maximize likelihood that submissiveness will be associated with high ranking, then the salient characteristics of these four environments are:

AD (maximum individual differences
(maximum submissiveness-related ranking

AN (maximum individual differences
(minimum submissiveness-related ranking

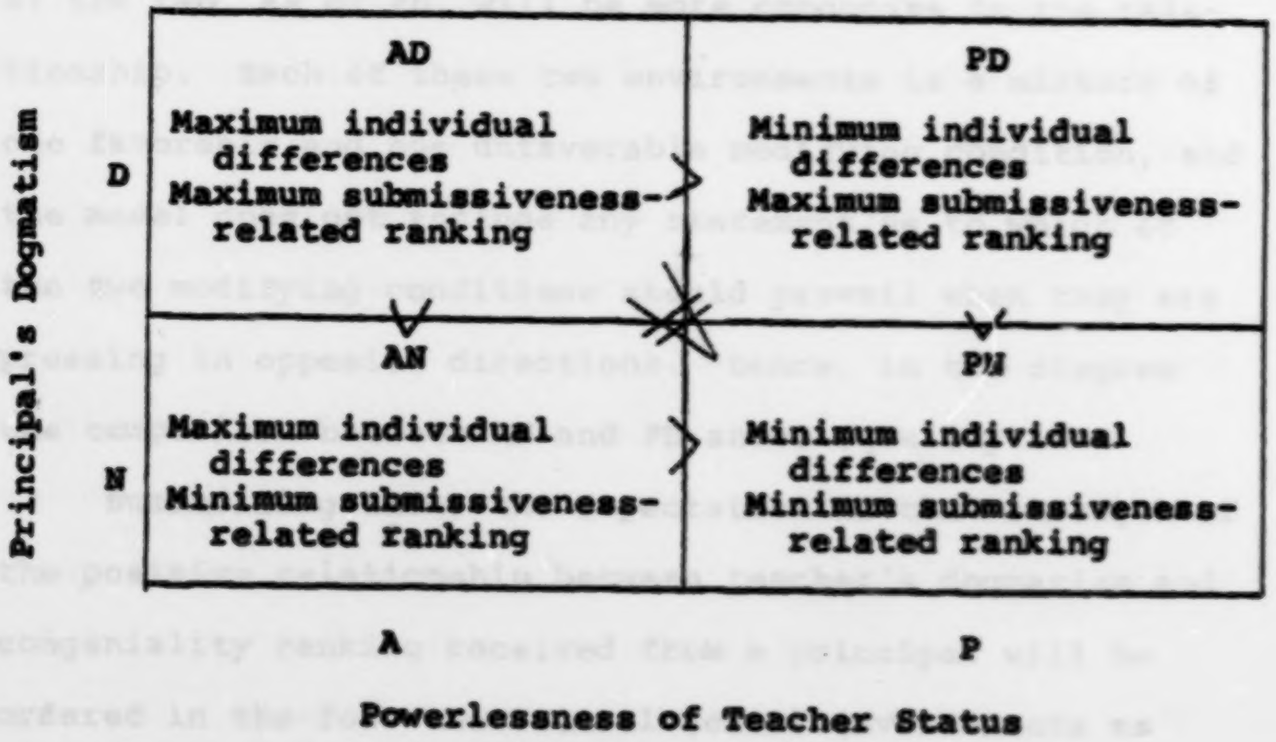
PD (minimum individual differences
(maximum submissiveness-related ranking

PN (minimum individual differences
(minimum submissiveness-related ranking

If, furthermore, the strength of the proposed relationship is assumed to vary directly with both individual differences and submissiveness-related ranking, each environment can be said to contain favorable or unfavorable conditions. It now becomes possible to make some predictions about what will be found in each of the four environments. In Figure 2, each cell has been compared with each of the other three cells as to the probable strength of the supposed relationship. An inequality or an equality sign indicates the logical outcome of the comparison. (Thus, AD PD shows that the relationship should be stronger in environment AD than in PD.)

FIGURE 2

CHARACTERISTICS OF FOUR HYPOTHETICAL SCHOOL ENVIRONMENTS


AD
Maximum individual differences
Maximum submissiveness-related ranking
PD
Minimum individual differences
Maximum submissiveness-related ranking
AN
Maximum individual differences
Minimum submissiveness-related ranking
PN
Minimum individual differences
Minimum submissiveness-related ranking
D
N
Principal's Dogmatism
A
P
Powerlessness of Teacher Status

The results of these comparisons lead to the following conclusions.

1) The proposed relationship will be strongest in the AD environment. Here, both modifying conditions are maximally favorable to the relationship. All three possible

comparisons are in one direction.

2) The proposed relationship will be weakest in the PN environment. Here, both modifying conditions are minimally favorable to the relationship. All three possible comparisons are in one direction.

3) The ordering of AN and PD is equivocal. Both should fall somewhere between AD and PN, so far as the strength of the proposed relationship is concerned; but it is impossible to deduce from the model which, if either, of the two, AN or PD, will be more conducive to the relationship. Each of these two environments is a mixture of one favorable and one unfavorable modifying condition, and the model does not include any statement as to which of the two modifying conditions should prevail when they are pressing in opposite directions. Hence, in the diagram the comparison between AN and PD shows equality.

Summarizing then, the expectation is that strength of the positive relationship between teacher's dogmatism and congeniality ranking received from a principal will be ordered in the four theoretical school environments as follows:

$$AD > AN = PD > PN$$

Clues as to the relative weights of the two conditions in the "mixture" cells must be empirically discovered.

At this point it should be recalled that the main proposition of this study attempts to relate dogmatic personality in the teacher to rankings received from two sources--principal and peers. Till now, the discussion has focused only on rankings by principals. The prediction as far as peer ranking is concerned is that teacher dogmatism will be negatively related to congeniality rank received from peers. This is based on Rokeach's contention that the dogmatic personality produces domineering behavior toward peers. Two additional variables have been introduced in terms of their probable effects on the hypothesized positive relationship between teacher dogmatism and principal's ranking, but there seem to be no clear indications as to how teachers' powerlessness or rater's dogmatism might modify the anticipated negative relationship between teacher's dogmatism and ranking by peers. It will be assumed, therefore, that this negative relationship will remain essentially constant across the four theoretical school environments described above.

There is another source of variation which may very well affect any relationships between teacher dogmatism and sociometric rankings received from superordinates and peers. This source can be thought of as an array of individual characteristics exclusive of personality structure, e.g., age, sex, years of job experience, etc. While it seems reasonable to suppose that professional background characteristics in particular might be pertinent, there are few indications as to what effects they may have. Consequently, some data will be obtained on these individual characteristics, but they will be treated only in an exploratory fashion.

2. Cognitive Behaviors Related to Dogmatic Personality

The joint effect of personality and situation are presumably accomplished through some kind of cognitive behavior. The central importance of this cognitive functioning has been recognized in a number of theories of behavior, though the nature of the mechanism involved has been conceived of in different ways. Thus, Kelly sees the basis of an individual's actions as reliance upon the predictive power of his "personal constructs."[13] Harvey, Hunt, and Schroder speak of "standardized evaluative predilections," which are necessary for understanding the combined effects of personality and situation.[14] Rokeach directs attention to the structure of belief systems and thereby hopes "to find a single set of concepts, a single language, that is equally appropriate to the analysis of personality, ideology and cognitive behavior."[15]

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[13] George A. Kelly, The psychology of personal constructs (New York: W. W. Norton & Co., Inc., 1955), Vol. 1, especially pp. 3-14.

[14] O. J. Harvey, David E. Hunt and Harold M. Schroder, Conceptual systems and personality organization (New York: John Wiley & Sons, Inc., 1961).

Rokeach conceives of the dogmatic-nondogmatic, or closed-open, continuum as descriptive of ways in which a person may organize his total system of beliefs and disbeliefs. This belief-disbelief system is a psychological system, which satisfies both the individual's need to ward off threat and his cognitive need to understand the world. It may or may not be a logical system. Rokeach equates "logical system" with "open (nondogmatic) system."

The extent to which a system is logical (open) is inversely related to the degree to which evaluation of information is influenced by irrelevant internal or external pressures. The most salient external pressures arise from the various forms of authority which Rokeach defines as any source of information for the individual. It is the nature of cognitive responses to authority which fundamentally differentiates the closed and open minds. Here is the covert behavior which presumably lies behind the presence or absence of overt submissiveness to authority figures, discussed in the preceding section. This study will examine two of the significant differences assumed to exist between cognitive responses to authority in the closed mind and in the open mind, and will try to relate these differences to teacher behavior toward authorities in the school setting.

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[15] Rokeach, op. cit., p. 7.

One difference has to do with the perceived general nature of authority. The contention is that the closed mind sees authority as absolute, while the open mind views authority as relative. Such a statement, in one form or another, is perhaps the most common entry in the various typologies of authoritarianism. Rokeach bases this contention on the argument that in the belief-disbelief system of the closed-minded person, the function of warding off threat predominates over the function of understanding the world. This results in an inability to distinguish information received from the source of that information. As Rokeach puts it, "In the closed system, the power of authority does not depend on cognitive correctness, but on the ability of authority to mete out reward and punishment. Given a variety of information stemming from an external source, the relatively closed person is forced to accept all or reject all in a 'package deal.'"[16] For the open-minded person the power of authority depends more upon its cognitive correctness; he is better able to evaluate information separately from its source.

Another difference in subjective meaning concerns perceived categories of authorities. Rokeach suggests that it is useful to think of two kinds of authority. "Positive" authority, he states, is seen by an individual as a reliable source of information to be believed; "negative" authority is seen as an equally reliable source of information not to be believed. The distinction between positive and negative authority is assumed to be sharper in the closed system than in the open system, i.e., the dogmatic person's uncritical acceptance of authority includes absolute acceptance of disbeliefs as well as beliefs. The open mind also makes use of the positive-negative categorization, but in a more tentative fashion--just as all authority in that system, since it is checked for its cognitive correctness, is tentative.

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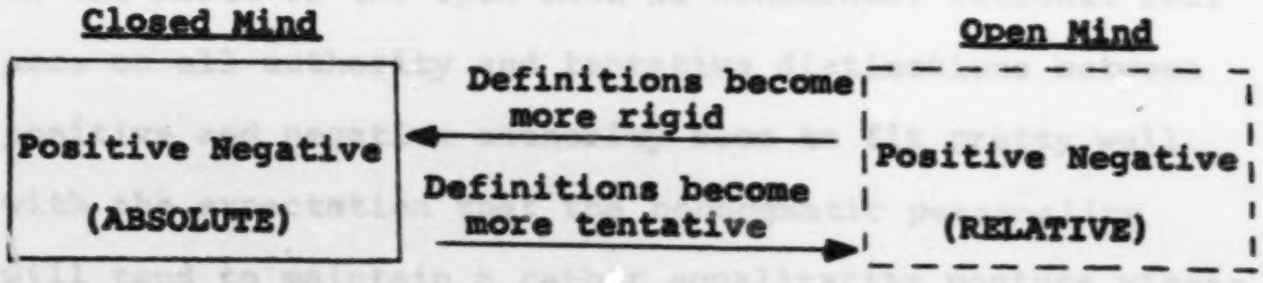
[16] *Ibid.*, p. 62.

A summary of these two characteristics of authority as they are conceived to exist along the continuum expressed by the closed-mind and open-mind may be shown as in Figure 3.

FIGURE 3

CHARACTERISTICS OF AUTHORITY


Closed Mind
Open Mind
Positive Negative
(ABSOLUTE)
Definitions become more rigid
Definitions become more tentative
Positive Negative
(RELATIVE)

Since the notions of absolute-relative nature and positive-negative categories of authority essentially involve connotative meaning, the Semantic Differential would seem to be an appropriate technique for obtaining information to test the configurations postulated in Figure 3. The Semantic Differential is designed to measure the connotative meaning of a given concept by having the subject rate that concept on a series of bipolar adjective scales. Thus, teachers could rate a number of potential sources of authority on a series of scales, and these descriptions could be analyzed in terms of both positive or negative meaning and tendency toward absolutist or rational orientation. The results of these analyses could then be related to dogmatism scores and checked against the predictions implicit in Figure 3.

It also seems appropriate to speculate about how these connotative meanings of authority may be related to the role behavior toward organizational authority figures which was discussed in the first section of this paper. As far as the model of the open mind is concerned, rational reliance on all authority and tentative distinctions between positive and negative authority seem to fit pretty well with the expectation that the nondogmatic personality will tend to maintain a rather equalitarian posture vis-a-vis organizational superordinates. Nor is it difficult to imagine how the perception of absolute positive authority in the closed mind could direct the dogmatic personality's oversubmissiveness to his superordinates. But the introduction of absolute negative authority into the conceptual scheme seems, at first glance, to pose something of a problem. What would happen if the dogmatic person were to find himself with an organizational superordinate whom he perceived as a negative authority, i.e., a source of erroneous information?

One possibility is that the closed mind may function so as to make it almost impossible for such a situation to occur. That is, the immediate power to reward and punish may cause every superordinate with whom the dogmatic person is in close contact to be seen as a positive authority. This is what Rokeach suggests, though not in so many words, when he speaks of negative authorities being built up in the closed mind only via information accepted from absolute positive authorities.[17] Within the closed mind only positive authorities are developed, as it were, through firsthand experience.

This solution--denying the existence of the problem[18]--

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[17] Milton Rokeach, The open and closed mind (New York: Basic Books, Inc., 1960), p. 61.

[18] Indeed this denial seems to be the only possible way to dispose of the problem without also disposing of part of the conceptual framework. For the assumption that the dogmatic person could simultaneously perceive an immediate superordinate as negative authority and behave submissively toward him would represent a chink in the theoretical armor

simply re-emphasizes the paramount importance of threat to the dogmatic person. In doing so, however, it directs attention to possible differential effects of power at a distance and power close at hand. While many studies have viewed authoritarian cognitive responses to higher status figures and to lower status figures within some framework relating threat to status, there has been almost no investigation of responses to socially distant high status figures vs. responses to high status figures present in the immediate social environment. The idea of positive and negative authority might serve as a simple conceptual tool for uncovering some differences in subjective meaning that may exist in these two situations. This study will test the inference drawn from Rokeach that the closed mind cannot afford to see a power figure in his environment as anything but a positive authority. The specific expectation is that nondogmatic teachers may perceive principals as negative authorities, but it is very unlikely that dogmatic teachers will do so.

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of dogmatism. The dogmatic person would be evaluating information separately from its (threatening) source, and would be submitting to what he considered erroneous. The difference between such conscious compliance and unconscious conformity is presumably crucial in the distinction between open and closed minds. Further aspects of this problem are discussed in the next chapter.

3. Summary and Hypotheses

Since the questions chosen for investigation have been generated for the most part by Rokeach's conceptualization of dogmatism, empirical findings regarding these questions will constitute at least a partial test of that theoretical framework. Specifically, this study would test predictions based largely on four hypothetical behaviors involving authority, which Rokeach employs in distinguishing between dogmatic or closed-minded and nondogmatic or open-minded persons. Two of these behaviors involve social interaction; two are cognitive behaviors.

Hypothesis 1: The dogmatic person typically behaves in an acquiescent, respectful manner toward any authority figure in his social environment, whereas the nondogmatic person tends to treat the authority figure more as an equal. This difference in behavior influences the judgment of the authority figure so that he tends to perceive the dogmatic subordinate as relatively cooperative and the nondogmatic subordinate as less adaptable. The tendency toward this type of judgment becomes greater as the dogmatism of the authority figure increases.

Prediction 1: Dogmatism in the teacher will be positively related to high rating on congenality as a co-worker received from a principal.

a) This relationship will be stronger when the principal is dogmatic than when the principal is nondogmatic.

b) This relationship will be weaker when teachers as a group within the social system of the school have relatively little decision-making power.

c) With principal's dogmatism and teachers' powerlessness combined to form four school environments, the strength of the relationship in these environments will be ordered as follows:

Autonomous teachers and Dogmatic principal > Autonomous teachers and Nondogmatic principal = Powerless teachers and Dogmatic principal > Powerless teachers and Nondogmatic principal

__Hypothesis 2__: The dogmatic person in interaction with peers typically behaves in an arrogant, cocksure manner, whereas the nondogmatic person maintains his reasonable, egalitarian stance. This difference in behavior influences judgment of peers so that they tend to perceive nondogmatic persons as more desirable co-workers.

__Prediction 2__: Dogmatism in the teacher will be negatively related to high rating on congeniality as a co-worker received from peers.

__Hypothesis 3__: There is a negative as well as a positive side to authority as it appears in belief systems. Closed minds make a greater distinction than do open minds between positive authorities as sources of information to be accepted and negative authorities as sources of information to be rejected. Closed minds, unlike open minds, are so attuned to threat that they cannot tolerate a negative perception of an authority figure who has immediate power over them.

Prediction 3a: In response to a Semantic Differential, in which concepts to be rated consist of various authorities found in the school setting, dogmatic teachers and principals will differentiate more sharply between descriptions of positive authorities and descriptions of negative authorities than will nondogmatic teachers and principals.

Prediction 3b: Dogmatism in teachers will be positively associated with their descriptions of principals as positive authorities.

Hypothesis 4: Closed minds are characterized by an arbitrary, absolute reliance on authority; open minds are characterized by a rational, tentative reliance on authority.

Prediction 4: In response to the Semantic Differential described in Prediction 3a, dogmatic more than nondogmatic, teachers and principals will tend to describe all positive authorities alike and all negative authorities alike.

(This prediction amounts to a guess as to how the absolute nature of authority might be reflected on the Semantic Differential. The assumption is that absolute reliance on authority tends to narrow the variety of information that is taken into account in either acceptance or rejection. Also, since only connotative meaning is involved in the Semantic Differential, any denotative differences between two positive or two negative authorities will not appear. The instrument allows the subject to make only general, metaphorical statements about "good-authorities-I-believe-in" and "bad-authorities-I-don't-believe-in.")

CHAPTER II

SUMMARY OF RELEVANT RESEARCH

1. Dogmatism as General Authoritarianism

As stated before, the rationale for this study stems from Milton Rokeach's conceptualization of authoritarianism. After working in the California group which developed the well-known F Scale, Rokeach continued his investigation into the nature of authoritarianism, and in 1960 presented his own theories in The Open and Closed Mind. The primary virtue which Rokeach claims for his framework is its generality; it represents an effort to define authoritarianism independently of any particular content, such as ethnocentrism or political persuasion.[1] According to Rokeach, the F Scale is of limited usefulness as a measure of authoritarianism because the development of that instrument was founded on assumptions about fascistic ideological content. This shortcoming of the F Scale has been voiced by other writers as well,[2] and--a point which is often ignored--was clearly implied by the originators of the F Scale.[3]

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[1] "Our goal . . . is to conceive of authoritarianism in an ahistorical way so that it will be equally applicable to all stages of history and to alternative forms of authoritarianism within a given historical stage." (Rokeach, op. cit., p. 9.)

To attain greater generality, Rokeach postulated a total system of beliefs and disbeliefs which exists for each individual, then focused on the structure, rather than the content, of this system. It is on the basis of hypothetical structural characteristics that Rokeach refers to a belief-disbelief system as relatively "closed" or relatively "open."[4]

Central to Rokeach's distinction between open and closed belief systems is the way in which authority is incorporated in the system. Defining authority as any source to which the individual turns to acquire new information or to check old information, Rokeach rejects the commonly used dichotomy of reliance on authority vs. reliance on reason. All of us, he points out, rely on authority. What distinguishes those persons high and low in authoritarianism is:

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[2] See for example: Edward A. Shils, Authoritarianism: "right and left," and Richard Christie, Authoritarianism re-examined, both in Richard Christie and Marie Jahoda (Eds.), _Studies in the scope and method of "the authoritarian personality"_ (Glencoe, Ill.: The Free Press, 1954). For statements of the more general concept of authoritarianism see: Eric Hoffer, _The true believer_ (New York: Harper and Brothers, 1951); Herbert Krugman, The appeal of communism to american middle class intellectuals and trade unionists, _The Public Opinion Quarterly_, 1952, _16_, 331-355; Irving A. Taylor, Similarities in the structure of extreme social attitudes, _Psychol. Monogr._, 1960, _74_, No. 2 (Whole No. 489).

[3] This implication is perhaps clearest in the description given of the "rigid low scorer" on the F Scale, "who, with respect to many of our variables . . . could hardly be distinguished from some of our high extremes." (Adorno, _et al_., _op. cit_., p. 772.)

[4] The defining characteristics of open and closed systems are described in detail in _The open and closed mind_, Chapters 2 and 3.

> . . . different notions about the nature of authority, different theories, if you will, about the way to employ authority as a cognitive liaison system to mediate between the person and the world he is trying to understand and adapt to.[5]

These different notions spring from the fact that in the closed belief system, the function of adapting, particularly in the sense of warding off threat, takes precedence over the function of understanding the world. In the open system the reverse is true.

> By open I mean that the power of authority rests solely upon the perception of the source's cognitive correctness, accuracy, and consistency with other information. . . . In closed authoritarian orientations to authority, however, the power of authority does not at all hinge upon cognitive correctness but solely on the ability of authority to mete out arbitrary rewards and punishments.[6]

By using Rokeach's image of a central-peripheral dimension underlying all cognitive systems, it is possible to picture beliefs about authority as the mediators between primitive beliefs and peripheral beliefs (Figure 4).

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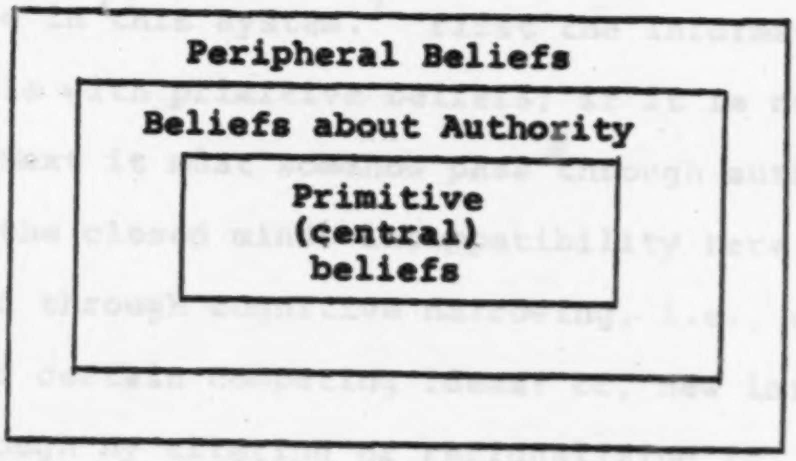
[5] Milton Rokeach, Authority, authoritarianism, and conformity. In Irwin A. Berg and Bernard M. Bass (Eds.), Conformity and deviation (New York: Harper & Brothers, 1961), p. 234.

[6] Ibid., p. 235.

FIGURE 4

CENTRAL-PERIPHERAL DIMENSION OF BELIEF SYSTEMS



In the central region lie primitive beliefs. These are beliefs which the individual thinks everyone holds, or, in the case of disbeliefs, no one holds. This means that, for the individual, a primitive belief or disbelief is rarely, if ever, questioned. In this one region of the cognitive system Rokeach feels that content is crucial. For example, a closed-minded person presumably has primitive beliefs about his own helplessness and loneliness in the world. Beliefs about authority lie in the middle region, and here it is the formal content rather than the specific content that counts. Beliefs about the nature of authority are more important than beliefs about any particular authority. Peripheral beliefs are all the thousands of beliefs and disbeliefs a person has about the world. In this region, the emphasis is placed upon the structural arrangement of beliefs and disbeliefs, not on the content of these beliefs and disbeliefs.

Rokeach offers an hypothesis about how new information is processed in this system.[7] First the information must be compatible with primitive beliefs; if it is not, it is rejected. Next it must somehow pass through authority beliefs. In the closed mind, incompatibility here may result in rejection through cognitive narrowing, i.e., selective avoidance of certain competing ideas; or, new information may get through by altering or rationalizing it. In the open mind, incompatible information is more likely to get through the authority beliefs and is less likely to be distorted in the process. Finally, the new information is filed among peripheral beliefs and disbeliefs. In the closed mind, peripheral beliefs and disbeliefs are relatively isolated from one another; communication exists only indirectly, through the intermediate authority region. For this reason, incongruent beliefs and disbeliefs may be entertained simultaneously, and "party-line" change may occur. In the open mind, there is a relatively high degree of communication and logical connection among peripheral beliefs. This implies that, for the open mind, it is in the peripheral region, rather than in the authority region, that incompatible information is apt to be rejected. Furthermore, in the open mind the assimilation of new information may cause rearrangement of other peripheral beliefs and disbeliefs. Put another way, the closed mind tends to tamper with new information in order to assimilate it, while the open mind tends to allow new information to modify old beliefs.

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[7] For a more detailed account of this process, see Rokeach, The open and closed mind, pp. 47-51.

Clearly, one mark of the closed system would be behavior commonly referred to as authoritarianism and intolerance. A measurement then of closed-mindedness should serve as a general measure of authoritarianism. The Dogmatism Scale was created to measure degree of closed-mindedness.

The design of the Dogmatism Scale attempts to tap dimensions assumed to describe the structure of belief-disbelief systems. Efforts were made to keep the items free from any particular ideological orientation; the Dogmatism Scale assesses the degree to which an individual's system, whatever its content, is closed. For this claim that the Dogmatism Scale is relatively independant of ideological content, so far as measurement of authoritarianism is concerned, Rokeach offers evidence drawn from comparisons made with other scales. Analyses of responses from a number of different political and religious groups on the Dogmatism Scale,[8] F Scale, Ethnocentrism (E) Scale, Political-economic Conservatism (PEC) Scale,[9] and the Opinionation Scale[10] all revealed a consistent pattern. Briefly, this pattern was that the F Scale correlated considerably higher than did the Dogmatism Scale with the E and PEC scales; and, while the F Scale showed high correlations only with Right Opinionation, the Dogmatism Scale showed high correlations with high scores on both Right and Left Opinionation.[11] Plant[12] and Insko[13] have replicated Rokeach's work with the Dogmatism Scale, the F Scale and the E Scale with essentially the same results. Additional support for the claim that the Dogmatism Scale is a more general measure of authoritarianism than is the F Scale is found in several factor analyses.[14] These studies clearly suggest that, although the relationship between the Dogmatism Scale and the F Scale is significant (r=.64), only the latter is strongly affected by the left-right ideological continuum. Finally, there is further evidence that the Dogmatism Scale, but not the F Scale, differentiates college students judged to be dogmatic and nondogmatic by their peers.[15]

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[8] The three dimensions used to describe belief-disbelief systems and the classification of items on the Dogmatism Scale in terms of these dimensions are summarized in Appendix II. The early work on the development of the Dogmatism Scale is reported in: Milton Rokeach, Political and religious dogmatism: an alternative to the authoritarian personality, Psychol. Monogr., 1956, 70, No. 18.

[9] Both the PEC Scale and the E Scale are described by Adorno, et al., in The authoritarian personality.

[10] The opinionation Scale was developed by Rokeach as a measure of general intolerance--a companion piece to the Dogmatism Scale. The Opinionation Scale is composed of extremely transparent items which are: 1) couched in strongly opinionated language; 2) about various clearly identifiable political and religious ideological positions.

[11] The opinionation Scale consists of two subscales, Left Opinionation and Right Opinionation. An item is assigned to one of the subscales according to the ideological position it expresses. (See Rokeach, The open and closed mind, pp. 80-87.)

[12] Walter T. Plant, Rokeach's dogmatism scale as a measure of general authoritarianism, Psychol. Rep., 1960, 6, 164.

[13] Chester A. Insko, Replication of one of Rokeach's D scale validation studies, Psychol. Rep., 1964, 14, 925-926.

Rokeach and his co-workers have presented evidence from a number of studies which appears to substantiate the main outline of the conceptual framework of open and closed belief systems. The open-closed mind distinction as revealed by dogmatism scores was shown to be related, as the theory would predict, to cognitive processes such as memory and problem solving, to the development of new perceptual patterns, to prejudice, and to attitude change.[16]

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[14] Milton Rokeach and Benjamin Fruchter, A factorial study of dogmatism and related concepts, _J. abnorm. soc. Psychol_., 1956, _53_, 356-360; Benjamin Fruchter, Milton Rokeach and Edwin Novak, A factorial study of dogmatism, opinionation and related scales, _Psychol. Rep_., 1958, _4_, 19-22.

[15] Insko, _op. cit_.

As the Dogmatism Scale has been used by others, additional support has appeared. Ehrlich offers further evidence for Rokeach's claim that dogmatism is not substantially related to academic aptitude.[17] In a partial replication of Rokeach's problem-solving studies, Lyda and Fillenbaum report agreement with Rokeach on the relationship between dogmatism and problem-solving ability, but offer a modified interpretation of the mechanism involved.[18] Going beyond the original work, hypotheses have been tested which relate dogmatism to other phenomena, and in general the results have supported predictions from the theory. Thus, dogmatism has been shown to relate as expected to learning set[19] and to readiness for psychotherapy.[20]

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[16] The bulk of these studies are reported in The open and closed mind. Rokeach has recently extended his investigations of belief systems in an unusual study of mental patients. (The three Christs of Ypsilanti [New York: Alfred A. Knopf, 1964].)

[17] Howard J. Ehrlich, Dogmatism and learning, J. abnorm. soc. Psychol., 1961, 62, 148-149.

[18] Larry Lyda and Samuel Fillenbaum, Dogmatism and problem solving: an examination of the Denny Doodlebug problem, Psychol. Rep., 1964, 14, 99-102.

[19] Frank Restle, Martha Andrews and Milton Rokeach, Differences between open-and-closed-minded subjects on learning set and oddity problems, J. abnorm. soc. Psychol., 1964, 68, 648-654.

[20] Herbert M. Lefcourt, Clinical correlates of dogmatism, J. clin. Psychol., 1962, 18, 327-328.

DiRenzo has investigated a number of relationships between dogmatism and the behaviors of professional politicians.[21] Finally, it has even been suggested that the open-closed mind concept may be useful in understanding pervasive individual differences in response to sensory stimuli.[22]

The variety of relevant investigations and their rather consistent outcomes make it seem reasonable at this point to accept the conceptualization of the open-closed mind as a more general framework in which to consider the authoritarian personality, and to expect the Dogmatism Scale to be relatively sensitive to authoritarianism of all stripes.

2. Social Behavior Toward Authority Figures

A. Relationship to Dogmatic Personality

Rokeach's definition of authority as any source to which an individual turns for information implies that authority takes impersonal as well as personal forms, and that no particular social status is prerequisite. The type of authority with which the first hypothesis in this study is concerned--a person holding relatively high status within an organization--is therefore only one of several kinds of authority. For purposes of this study, this type of authority will be referred to as an "authority figure."

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[21] Gordom James DiRenzo, A social psychological analysis of personality structures of members of the Italian Chamber of Deputies. Unpublished doctoral dissertation, University of Notre Dame, 1963.

[22] Martin E. Kaplan and Erwin Singer, Dogmatism and sensory alienation: an empirical investigation, J. consult. Psychol., 1963, 27, 486-491.

Probably because he was chiefly concerned with cognitive systems and cognitive activity, Rokeach did not give much attention to social behavior toward authority figures. He does, however, bring this behavior into his theory in the statement that dogmatic persons are expected to behave in an overly submissive way toward authority figures. Rokeach discusses this point in the report of a validation study of the Dogmatism Scale. In that study it was discovered that, by using a general description of the assumed characteristics of dogmatic persons (e.g., intolerance, arrogance, rigidity, etc.) as a guide, college students could successfully identify peers who scored high and low on the Dogmatism Scale. College professors, on the other hand, using the same criterion, could not make such a discrimination among students whom they knew well. Rokeach offers as explanation of these results the hypothesis that the respectful behavior of the dogmatic student in the face of professorial authority masks what would otherwise be cues to his dogmatism. He further suggests that the greater willingness of the nondogmatic student to offer challenging opinions to an authority figure might, to some extent, lead the professor to judge nondogmatic students as dogmatic, and that this tendency might increase with the increase in dogmatism in the professor himself.[23]

The evidence most pertinent to the hypothesis that dogmatic teachers, more than nondogmatic teachers, will behave in an acquiescent way toward principals come from Vidulich and Kaiman.[24] In a laboratory setting they found that high scorers on the Dogmatism Scale conformed more (on autokinetic responses) to the suggestions made by high status stimulus persons than to suggestions made by low status persons, and that this pattern was not true of low scorers. Some slight additional support for the thesis comes from Wrenn, whose highly dogmatic subjects were distinguished from low dogmatic subjects partly by their greater concern for learning what the experimenter wanted of them so that they could comply.[25] Other indirect evidence is found in McCarthy and Johnson's report that when questioned about a student outbreak, highly dogmatic subjects tended to accept the police version of the story while low dogmatic subjects tended to accept the students' version.[26]

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[23] Rokeach, The open and closed mind, pp. 102-107.

[24] Robert N. Vidulich and Ivan P. Kaiman, The effects of information source status and dogmatism upon conformity behavior, J. abnorm. soc. Psychol., 1961, 63, 639-642.

[25] Robert L. Wrenn, The effect of preparatory involvement in goal validation in open and closed belief systems. Unpublished doctoral dissertation, The Ohio State University, 1962.

Most of the relevant studies in this area have used the F Scale rather than the Dogmatism Scale as the measure of authoritarian personality. (This is not surprising since the F Scale antedates the Dogmatism Scale by ten years and virtually introduced the whole notion of this kind of personality structure.) If the Dogmatism Scale does indeed simply encompass more types of authoritarianism than the F Scale, then results from the two instruments should not be incompatible. Rather, it should be possible to subsume F Scale findings as a category (of "right" authoritarianism) under dogmatism. It is on this basis that the following review of some F Scale studies is offered.

The characteristic of "authoritarian submission" to authority figures played a prominent role in the description of the authoritarian personality as it was identified by the F Scale.[27] In the voluminous work with the F Scale which has followed, this characteristic, in one guise or another, has often been noted. It appears in general descriptions of other models of personality which have drawn heavily on the concept of authoritarianism.[28] It crops up as a minor theme in several studies; Wells, for instance, found that high F Scale scorers (students) were "much more complimentary" than low scorers in their comments about a course made to the instructor.[29] Somewhat surprisingly, there has apparently been very little direct investigation of the behavioral manifestations implied by the concept of authoritarian submission. Lambert did define submission in terms of verbal behavior, then experimentally verified it as one of several characteristics which distinguished high from low F Scale scorers among educators.[30] In a study

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[26] John McCarthy and Ronald C. Johnson, Interpretation of the "City Hall Riots" as a function of general dogmatism, Psychol. Rep., 1962, 11, 243-245.

[27] "Authoritarian submission was conceived of as a very general attitude that would be invoked in relation to a variety of authority figures--agreement with them (F Scale items) would indicate not merely a realistic, balanced respect for valid authority, but an exaggerated, all-out, emotional need to submit," Adorno, et al., op. cit., p. 231. It should be noted that, if the F Scale is assumed to identify only a subclass of dogmatic personalities, then it might be that this kind of behavior is unique to that

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subclass. The evidence cited above on the Dogmatism Scale, however, leads one to believe that the characteristic of authoritarian submission can safely be generalized to all types of dogmatism. Such behavior is also, of course, in line with the theoretical functioning of the closed mind.

[28] Thus, for example, Harvey, Hunt and Schroder, in their effort to bring variables of personality and of cognitive functioning into one framework, have stated that their System I type is roughly equivalent to high F Scale scorers and is characterized in part by overgeneralized submission to authority. (Harvey, Hunt and Schroeder, op. cit.)

[29] William D. Wells, Behavioral correlates of authoritarian personality. Unpublished doctoral dissertation, Stanford University, 1954.

[30] Philip Lambert, Interaction between authoritarian and non-authoritarian principals and teachers, Genet. Psychol. Monogr., 1958, 58, 163-205.

of the relationship between authoritarianism and non-verbal submissive behavior, Block and Block found that highly authoritarian subjects, as measured by the E Scale, complied in a laboratory setting more readily than low authoritarians with suggestions from the experimenter (authority) that they continue working at an extremely dull task.[31] (Here, however, the relationship between submissive behavior and F Scale scores can only be inferred on the basis of the many reports of high correlations consistently obtained between F Scale and E Scale responses.)

In several studies, attitude change of one kind or another has provided an index of acceptance of authority. Harvey and Beverly, in a carefully designed experiment on opinion change, showed that high authoritarians were more influenced than low authoritarians by a high status source of influence.[32] Wagman's work indicated that high F scorers were more apt to be influenced by authoritarian suggestions than by objective information, while the opposite pattern seemed true for low F scorers.[33] Using the

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[31] Jeanne Block and Jack Block, An interpersonal experiment on reactions to authority, Hum. Relat., 1952, 5, 91-98.

[32] O. J. Harvey and George D. Beverly, Some personality correlates of concept change through role-playing, J. abnorm. soc. Psychol., 1961, 63, 125-130.

[33] Nathaniel M. Wagman, An investigation of the effectiveness of authoritarian suggestion and non-authoritarian information as methods of changing the prejudiced attitudes of relatively authoritarian and non-authoritarian personalities. Unpublished doctoral dissertation, University of Michigan, 1954.

Minnesota Teacher Attitude Inventory, a scale derived in part from the concept of the authoritarian personality, Solomon obtained results which indicated greater attitude change among authoritarian students than among non-authoritarian students in a classroom discussion group setting.[34] His interpretation is interesting and pertinent. Solomon suggested that the authoritarians were responding to subtle and perhaps inadvertent cues given by the instructor in lectures as to how he expected students to think. Even though the instructor did not participate in the group discussions, the authoritarians showed deference to his absentee leadership. Another piece of information regarding attitude change comes from Berkowitz and Lundy, who controlled separately for authoritarianism and interpersonal confidence.[35] They found that attitude change toward agreement with authority figures (military in this case) was most strongly associated with a combination of high authoritarianism and high interpersonal confidence.

The bulk of the relevant F Scale studies have had to do with verbal behavior which seems logically associated with submission to authority. Some of these studies have simply measured the amount of positive written evaluations elicited by different stimulus persons from various F Scale scorers. So, Medalia reports that increase in F score is associated with increase in positive evaluation of the formal leadership in a military setting.[36] French and Ernest found a significant positive correlation between F score and acceptance of military ideology.[37] Haythorn, _et al_. have shown that in experimentally constituted groups, high F Scale followers were more satisfied with appointed leaders, but their reports from observers do not clearly indicate that these followers were more submissive toward their leaders.[38] On a slightly more general level, Jones offered the hypothesis that high authoritarians are more sensitive to external power cues than are low authoritarians in forming opinions of others.[39] In a partial replication of Jones's study, Wilkins and De Charms have come up with a modified interpretation which states that high authoritarians are not necessarily more aware of external power cues, but do rely on them more than low authoritarians in making positive evaluations of other persons.[40] Kates' study, also inspired by Jones, offers still more evidence that high authoritarians tend to associate perception of power with ascribed positive traits.[41] In somewhat the same vein, Christie states that highly authoritarian soldiers were better able than low authoritarians to predict rankings of their peers by non-commissioned officers, though Christie was unable to say whether this came about as a result of greater sensitivity to authority or use of the same criteria for ranking.[42]

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[34] Adrian Solomon, Authoritarian attitude changes and group homogeneity, J. soc. Psychol., 1963, 59, 129-135.

[35] Leonard Berkowitz and Richard M. Lundy, Personality characteristics related to influence by peers or authority figures, J. Pers., 1957, 25, 306-316.

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[36] Nahum S. Medalia, Athoritarianism, leader acceptance and group cohesion, _J. abnorm soc. Psychol_., 1955, _51_, 207-213.

[37] Elizabeth G. French and Reymond R. Ernest, The relation between authoritarianism and acceptance of military ideology, _J. Pers_., 1955, _54_, 181-191.

[38] William Haythorn, Don Haefner, Arthur Couch and Launor Carter, The effects of varying combinations of authoritarian and equalitarian leaders and followers, _J. abnorm. soc. Psychol_., 1956, _53_, 210-219.

[39] Edward E. Jones, Authoritarianism as a determinant of first-impression formation, _J. Pers_., 1954, _23_, 107-127.

Some attempts to explain the deferential behavior of authoritarians toward high status figures have been couched in terms of displaced hostility toward authority. This was suggested by the makers of the F Scale and has been elaborated by at least two other investigations.[43] De Soto,

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[40] Edward J. Wilkins and Richard DeCharms, Authoritarianism and response to power cues, J. Pers., 1962, 30, 439-457.

[41] Solis L. Kates, First-impression formation and authoritarism, Hum. Relat., 1959, 12, 277-286.

[42] Christie, op. cit.

[43] John W. Thibaut and Henry W. Riecken, Authoritarianism, status and the communication of aggression, Hum. Relat., 1955, 8, 95-120; and A. H. Roberts and R. Jessor, Authoritarianism, punitiveness and perceived social status, J. abnorm. soc. Psychol., 1958, 56, 311-314. Roberts and Jessor make a point relevant to the present study, "the punitive behavior of an individual in an interactional

Kuethe and Wunderlich offer another explanation--the authoritarian's general, persistent and denied fear.[44] This is close to Rokeach's concept of fundamental beliefs about helplessness and loneliness which are supposed to exist in the closed mind. There is also some support throughout these studies for the idea that non-authoritarians tend to use direct aggression independently of status; that is, they may indeed, as Rokeach suggested, present quite an unsubmissive front to authority figures.

One problem which has been associated with the measurement of authoritarianism deserves further attention here. There has been protracted debate--as yet inconclusive--over the effects of acquiescent response set on authoritarianism scores. Briefly put, does a scale measure authoritarian outlook, or does it, to a large extent, measure tendency to agree with test items? Reviews of much of this controversy concerning the F Scale are given in summaries by Christie and Cook[45] and by Titus and Hollander.[46]

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situation is dependent upon both his authoritarianism and certain social status cues present in his stimulus environment." (p. 313).

[44] C. DeSoto, J. L. Kuethe and R. Wunderlich, Social perception and self-perception of high and low authoritarians, J. soc. Psychol., 1960, 52, 149-155.

[45] Christie and Cook, op. cit.

[46] H. Edwin Titus and E. P. Hollander, The California F Scale in psychological research: 1950-1955, Psychol. Bull., 1957, 54, 47-64.

Recently several investigators have stated that the Dogmatism Scale is also susceptible to acquiescent response bias.[47] N. L. Gage and others have championed the position that acquiescence is itself a factor in authoritarianism.[48] Gage argues that, if this is so, the most valid kind of scale item is one worded so that an agreement response is scored as authoritarian, because in this case either the subject's tendency to agree with item content or his tendency to acquiesce is picked up as authoritarian.[49] All the items in the Dogmatism Scale are worded in this way, and so presumably maximize chances of uncovering these different aspects of authoritarianism. While some writers have disagreed with the idea that acquiescence to test items may be part and parcel of authoritarian personality, the whole problem of careful redefinition of authoritarianism in this regard has been largely

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[47] Edward Lichtenstein and Robert P. Quinn, Dogmatism and acquiescent response set, *J. abnorm. soc. Psychol.*, 1961, *63*, 636-638; Arthur Couch and Kenneth Keniston, Yeasayers and naysayers; agreeing response set as a personality variable, *J. abnorm. soc. Psychol.*, 1960, *60*, 151-174; Dean Peabody, Attitude content and agreement set in scales of authoritarianism, dogmatism, anti-Semitism, and economic conservatism, *J. abnorm. soc. Psychol.*, 1961, *63*, 1-11.

[48] See for example: N. L. Gage, George S. Leavitt, and George C. Stone, The psychological meaning of acquiescence set for authoritarianism, *J. abnorm. soc. Psychol.*, 1957, *55*, 98-103; N. L. Gage and B. B. Chatterjee, The psychological meaning of acquiescence set: further evidence, *J. abnorm. soc. Psychol.*, 1960, *60*, 280-283; H. J. Leavitt, H. Max and J. H. Roche, Authoritarianism and agreement with things authoritative, *J. Psychol.*, 1955, *40*, 215-221. Edward B. Klein, Stylistic components of response as relative to attitude change. Unpublished doctoral dissertation, Columbia University, 1960. Some support for this position is also offered by Samuel Messick and Norman Frederikson who feel that acquiescence and authoritarianism are partially overlapping. (Ability, acquiescence and authoritarianism, *Psychol. Rep.*, 1958, *4*, 687-697.)

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[49] To paraphrase Gage, the comparison of two different types of wording of items may be shown as follows:

Type of wording	Response	
	Agree	Disagree
I. Agreement = authoritarian	a. Agree with content = authoritarian	a. Disagree with content=non-authoritarian
	b. Agree through acquiescence=authoritarian	b. Not acquiesce = non-authoritarian
II. Agreement = non-authoritarian	a. Agree with content=non-authoritarian	a. Disagree with content=authoritarian
	b. Agree through acquiescence=authoritarian	b. Not acquiesce=non-authoritarian

It can be seen that Type I wording, given this reasoning, allows consistent interpretation of responses, while Type II wording results in equivocal assessments.

There have been some efforts to control acquiescent response set by composing instruments using items of both types. (R. Christie, Joan Havel and B. Seidenberg, Is the F Scale irreversible? J. abnorm. soc. Psychol., 1958, 56, 143-159; Peabody, op. cit.) For an interesting comment on a scaling problem inherent in such a procedure see: Franz Samuelson, Agreement set and anti-content attitudes in F Scale, J. abnorm. soc. Psychol., 1964, 68, 338-342.

ignored. For this reason, Gage's position takes on a special theoretical interest so far as the concept of dogmatism is concerned. Acquiescence to the symbolic authority of the test and its administrator seems to be consonant with the description of the dogmatic personality, and this study will proceed on the assumption that responses to the Dogmatism Scale which result from acquiescence to the test situation will add to rather than detract from the validity of the measurement.

B. Relationship to Organizational Status

While the evidence reviewed above indicates that personality has something to do with submissive behavior toward authority, this behavior provides an excellent example for the thesis that one cannot predict behavior from personality variables alone. That this same behavior occurs for other reasons has been spelled out in a number of theoretical formulations. Rokeach distinguishes between conformity and compliance, both of which may manifest themselves in submissive behavior.[50] Conformity, he says, is a state of mind--presumably of the closed mind--and takes place because the individual, attuned to threat, cannot discriminate and evaluate information independently of its source. Compliance, on the other hand, is a conscious action. It may occur as a function of coercion, even though the individual disagrees with the relevant information. In terms of the theory, compliance represents the atypical case, in which, for the closed mind, the authority's ability to reward and punish outweighs the cognitive correctness of the information. This is similar to Bendix's observation that some behavior occurs in spite of, rather than because of personality predispositions.[51]

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[50] Rokeach, Authority, authoritarianism and conformity.

Similar distinctions have been made by others. Kelman, for example, postulates three processes of influence,[52] and Jahoda offers four;[53] in each case "compliance" is described in terms roughly equivalent to Rokeach's. The essence of this difference between conformity and compliance has also been studied as "private" vs. "public" acceptance of influence. Festinger analyzes some of the situational determinants of these two types of acceptance.[54] French and Raven relate them to their categories of social power.[55]

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[51] Reinhard Bendix, Compliant behavior and individual personality, Amer. J. Soc., 1952, 58, 292-303.

[52] Herbert C. Kelman, Compliance, identification and internalization: three processes of attitude change, J. of conflict Resolution, 1958, 2, 51-60.

[53] Marie Jahoda, Psychological issues in civil liberties, Amer. Psychologist, 1956, 11, 234-240.

[54] Leon Festinger, An analysis of compliant behavior. In Muzafer Sherif and M. O. Wilson (Eds.), Group relations at the crossroads (New York: Harper & Brothers, 1953).

[55] John R. P. French, Jr. and Bertram H. Raven, The bases of social power. In Darwin Cartwright and Alvin

Jahoda builds the public-private dichotomy into an elaborate typology of conforming and independent behaviors.[56] In these writings as well as in others on the same topic, public acceptance is seen as a result of relatively coercive external factors. It is then, essentially, the difference between compliance and conformity, between public and private acceptance of influence that we speak of when we turn to a consideration of external pressures from organizational status as opposed to internal pressures from personality.

It is patently true that the very structure of a hierarchical formal organization tends to insure that a minimum amount of submissive behavior to superordinates will cut across personality differences. This is stated or implied in most sociological approaches to the study of formal organizations, but just what variations in structure may press for oversubmissiveness is not at all well worked out. A recent summary of relevant literature offered by Forehand and Gilmer[57] leads one to the conclusion that

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Zander (Eds.), Group Dynamics (New York: Harper & Row, Publishers, 1960); Bertram H. Raven and John R. P. French, Jr., Legitimate power, coercive power, and observability in social influence, Sociometry, 1958, 21, 83-97.

[56] Marie Jahoda, Conformity and independence, Hum. Relat., 1959, 12, 99-120.

[57] Garlie A. Forehand and B. von Haller Gilmer, Experimental variation in studies of organizational behavior, Psychol. Bull., 1964, 62, 361-382.

there is very little empirical evidence specifically in this area. This lack of information has probably resulted from the fact that in most studies of formal organizations individual responses have been treated only as they affect organizational goals. One can only infer, therefore, in a general way from theories of formal organization, that degree of oversubmissiveness is probably affected by such structural elements as shape of the hierarchical pyramid (relative numbers of superordinates and subordinates), type of control mechanism (impersonal vs. hierarchy of authority), predominate pattern of communication (horizontal or vertical), democratic or autocratic decision-making.[58] That there do exist structural elements bearing on oversubmissiveness in some school staffs seems a reasonable assumption in light of several reports which indicate that teachers appear to see this kind of behavior as a frequent affliction of their profession.[59]

Characteristics of groups within a hierarchy may also affect the incidence of oversubmissive behavior. At least, some evidence from small group studies indicates that inhibition of outward aggression toward higher status persons may be increased by certain group characteristics such as mobility,[60] and may be decreased by other group characteristics such as cohesiveness.[61] Most of these studies, however, do not make clear the extent to which differential status per se overrides personality differences because personality differences are not controlled in their designs.[62]

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[58] An excellent discussion of these attributes and cues as to how they may affect oversubmissive behavior can be found in Peter M. Blau and W. Richard Scott, Formal Organizations (San Francisco; Chandler Publishing Co., 1962), especially Chaps. 7 and 9.

[59] For a rather explicit statement, though it is based on quite an informal study, see Arthur Blumberg, Are teachers doormats? Educ. Admin. and supervision, 1959, 45, 215-219. More general coverage is given by Howard S. Becker, The teacher in authority system of the public school, J. educ. Soc., 1953, 27, 128-141.

Other inferences about how oversubmissiveness may appear at certain levels within an organization can be drawn from theoretical formulations of psychological mechanisms which mediate structural effects. Cohen sees organizational rituals of submission as ritual denials of hostility, and he relates these rituals to the amount of social distance between statuses.[63] One could speculate about specific conditions of social distance which might result in the development of rituals of oversubmission. Presthus postulates that submissiveness to authority is enmeshed in the organization through the medium of anxiety reduction; over-compliance in this framework is seen as a common type of exaggerated response.[64] In a similar vein, Golembiewski analyzes threat as the basic mechanism usually employed in organizations to secure submission to the aim of high production.[65] The concept of threat seems most appropriate for use in the present study since sensitivity to threat has already been offered as the fundamental explanation for oversubmissiveness in the dogmatic person. Thus, extreme sensitivity to threat may be seen as resulting from personality pressure in some cases and from situational pressure in other cases.

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[60] Harold H. Kelley, Communication in experimentally created hierarchies, Hum. Relat., 1951, 4, 39-56; Arthur R. Cohen, Upward communication in experimentally created hierarchies, Hum. Relat., 1958, 11, 41-53; William H. Read, Upward communication in industrial hierarchies, Hum. Relat., 1962, 15, 3-15.

[61] See for example: Albert Pepitone and George Reichling, Group cohesiveness and the expression of hostility, Hum. Relat., 1955, 8, 327-337; Ezra Stotland, Peer groups and reactions to power figures. In Darwin Cartwright (Ed.), Studies in Social Power (Ann Arbor, Michigan: The University of Michigan)(Research Center for Group Dynamics, The Institute for Social Research.)

[62] Thibaut and Reicken, op. cit., do offer some information in this respect. Their findings indicate that low status tends to inhibit aggression to some degree across the board, but that this tendency is increased when high authoritarianism is associated with low status. This finding seems to be in general agreement with the position taken in the present study.

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[63] Yehudi A. Cohen, Some aspects of ritualized behavior in interpersonal relationships, Hum. Relat., 1958, 11, 195-214.

[64] Robert V. Presthus, Toward a theory of organizational behavior, Admin. Science Quart.

[65] Robert T. Golembiewski, Behavior and organization: O & M and the small group (Chicago: Rand McNally, 1962).

Golembiewski points out that threat may backfire; it may result in subordinates' rejection rather than acceptance of production goals. But there has been little study of exactly how varying conditions of threat within the organizational structure affect patterns of subordinates' responses in direct interaction with authority figures. It is precisely this face-to-face response which is important in the present study. While subordinates' total reactions to threat may very well hinder rather than aid attainment of an organizational goal, it may still be true that increased threat leads to superficial compliance to a superordinate. In other words, the unintended consequences of threat may take more devious paths than that of directly resisting organizational authority figures.[66] This seems reasonable because of the relationship between threat and power. Threat is experienced to the degree that the individual is powerless, to the extent to which he is unable to control his situation in order to satisfy his needs.[67] He may use various means to try to augment his power, but, lacking power, he is unlikely to engage in open contest with higher power figures. Much the same line of reasoning is used by Jones in his recent work on ingratiation tactics and how they may be affected by organizational status.[68] Jones' studies offer the clearest evidence so far that ingratiating behavior (and oversubmissiveness may be one kind) can be viewed as an attempt to equalize power.

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[66] A case in point is the well-known phenomenon of the development of an informal social system among subordinates, frequently with a set of norms which are subversive from the point of view of the organization. An important aspect of these informal systems is that they offer new sources of power without necessitating overt resistance to superior organization power. In the extensive literature on this subject, a cogent analysis of the workings of informal systems is given by George C. Homans, _The human group_ (New York: Harcourt, Brace and Co., 1950), Chaps. 3-6.

In addition to the common-sense appeal of this contention, it seems possible to reinterpret some of the evidence from studies cited above to support it. In the first place, the indirect yet conscious effort is consonant with the distinction between compliance and conformity, between public and private acceptance of authority. Also, in the studies of small groups, differential status may be viewed as an example of imbalance of power. Group mobility then may depress outward aggression toward a higher status by increasing sensitivity to this imbalance, while group cohesiveness may facilitate aggression through decreasing sensitivity to the imbalance. While the studies of formal organizations are not clear-cut, it is possible to phrase many structural elements (e.g., type of control mechanism, communication pattern, type of decision-making) in terms of power relationships, and to postulate that oversubmissive immediate responses from subordinates will accompany certain power discrepancies in a variety of situations.

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[67] Etzioni suggests that degree of subordination to organizational power is a useful analytical dimension in describing "lower participants" in organizations. This is presented as part of his larger framework for categorizing organizations in terms of types of power and types of compliance to power. A conceptual system like Etzioni's might help identify various combinations of structural characteristics which encourage oversubmissiveness and/or alternate responses to superordinates. (Amitai Etzioni, A comparative analysis of complex organizations [New York: The Free Press of Glencoe, Inc., a Division of the Crowell-Collier Publishing Co., 1961].)

[68] Edward E. Jones, Ingratiation (New York: Appleton-Century-Crofts, 1964).

In a recent volume, Cartwright has called attention to power as a neglected variable in research in social psychology.[69] He points out that power plays a pervasive role in all types of interaction. In a study which investigated both personality and situational effects on reactions to power, Cohen uses a theoretical model relating threat to power, and concludes,

> A strong and pervasive power situation which is threatening may affect everyone regardless of variations in their personality make-up, though people may possibly differ in the mechanisms by which they handle threat. On the other hand, when the situational push is minimal . . . then the self-selective factor of different personality predispositions may operate to create differences between people in their threat-oriented behavior.[70]

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[69] Darwin Cartwright (Ed), Studies in Social Power (Ann Arbor, Michigan: The University of Michigan)(Research Center for Group Dynamics, Institute for Social Research), 1959.

[70] Arthur R. Cohen, Situational structure, self-esteem and threat-oriented reactions to power. In Cartwright, op. cit., p. 50.

This study takes essentially the same position--that all members of relatively powerless groups will be affected by threat stemming from lack of power. It also will test the further hypothesis that for members of a powerless status, the predominate mechanism for handling threat, as it is represented in face-to-face interaction with a superordinate, will take the form of oversubmissive behavior.

C. Relationship to Rating by Superordinates

A great number of studies have used some sociometric technique or other evaluation device to investigate leader-follower relationships, but very little of the evidence is relevant to the question of the effects of oversubmissive behavior on congeniality ratings given by superordinates and to the relationship between oversubmissiveness and authoritarianism.

There is some indirect evidence which seems to support the hypothesis that superordinates will generally respond favorably to submissive behavior. Christie reports that sociometric choices obtained from subjects in military training groups showed that noncommissioned officers tended to like men who did not create disruption.[71] Furthermore, a comparison of F scores obtained at the beginning and at the end of the training period showed that those men who received more mentions of doing well in training shifted most toward higher F scores. A report on the development of the Minnesota Teacher Attitude Inventory contains information which indirectly supports the hypothesis that principals will tend to prefer authoritarian teachers. The inventory was based partly on a consideration of authoritarianism; a high score on the inventory presumably indicates low authoritarianism. In validating the instrument against several other types of ratings, the lowest correlation was obtained with principals' ratings of teachers.[72]

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[71] Richard Christie, Changes in authoritarianism as related to situational factors, Amer. Psychologist, 1952, 7, 307-308 (abstract).

On the other hand, contradictory results come from Rohde, who tested the hypothesis that high F Scale scores among aircrew members would receive more sociometric choices from their airplane commanders than would low F Scale scorers.[73] Rohde derived the hypothesis by reasoning very similar to that used here--that high scorers would tend to be more submissive to authority figures. The results did not support the hypothesis. On two of the choice items--desirability as a friend and willingness to take the man into combat with him--a significant negative correlation appeared between commander's choice and crew member's F score. A third item--commander's confidence in the man--showed no correlation with F score. It should be noted, however, that the situational pressures, which must have been considerable in the wartime, military setting, were not taken into account in Rohde's study. It is possible, for example, that the situation wiped out individual differences in submissive behavior and that the commanders responded to other behaviors associated with F Scale scores. It is also possible that a combat situation is a somewhat atypical case in which submissive behavior is not desired by superordinates.[74]

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[72] W. W. Cook, Personality characteristics of successful teachers, Amer. Assoc. of Colleges for Teacher Educ., 7th Yearb., 1954, 63-70.

[73] Kermit J. Rohde, The relation of authoritarianism of the aircrew member to his acceptance by the airplane commander, Amer. Psychologist, 1951, 6, 323.

The only study found so far which relates Dogmatism Scale scores to ratings by superordinates comes from Hough and Amidon, whose subjects were student teachers and their supervisors.[75] These investigators got a negative correlation between students' dogmatism scores and supervisors' ratings. The ratings, however, were of a rather global nature and concerned the student teacher's classroom behavior. Whatever the finding indicates about the effects of dogmatism on over-all ratings of teacher effectiveness, it does not seem to clarify the relation between dogmatism and superordinate's perception of congeniality in subordinates.

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[74] That there is some difference between criteria used for rating by military leaders in a combat situation and criteria used by military leaders in a non-combat setting is indicated by a study which showed that ratings given by superordinates during military training did not successfully predict ratings given by superordinates in combat. (Stanley B. Williams and Harold J. Leavitt, Group opinion as a predictor of military leadership, J. consult. Psychol., 1947, 11, 283-291.

[75] John B. Hough and Edmund Amidon, An experiment in pre-service teacher education, Paper read at the annual meeting of the American Educational Research Association, Chicago, Illinois, February, 1964.

3. Social Behavior Toward Peers

One of the hypotheses to be tested states that there will be a negative relationship between dogmatism in the teacher and ranking received from other teachers on the criterion of congeniality as a co-worker.[76] The most direct support for this expectation comes from studies which have related authoritarianism scores to some kind of sociometric choice among peers. Masling, Greer and Gilmore report that naval recruits gave more sociometric choices to those scoring low on an authority acceptance scale (correlation r=.59 with F Scale).[77] Stott found that in discussion groups of college students there was a negative correlation between sociometric choices received and the receiver's score on the Dogmatism Scale.[78] This relationship was not significantly influenced by the dogmatism score of the chooser.

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[76] Strictly speaking, only sociometric choices made on the basis of a criterion similar to the "easy--hard to work with" dimension used in this study are truly comparable. The complexity of the interactions of different criteria and choice patterns has been presented by a number of writers (e.g., Helen Hall Jennings, Sociometric structure in personality and group formation. In Sherif and Wilson, op. cit.). The problem, however, of possible differential effects of authoritarianism on various sociometric criteria is beyond the scope of this study.

[77] Joseph Masling, F. Loyal Greer and Robert Gilmore, Status, authoritarianism and sociometric choice, J. soc. Psychol., 1955, 41, 297-310.

This lack of effect from the authoritarianism of the chooser has also been noted by investigators who obtained peer nominations for leaders. For example, Hollander found a negative relationship between F Scale score and number of leadership choices received from peers,[79] while Haythorn, et al. found that low F score was associated with higher peer rating for emergent leaders in discussion groups.[80] In neither of these studies did the F score of the chooser materially affect the preference for a low F score leader choice.[81] There seems to be some justification then for assuming that the negative relationship between dogmatism and peer ranking will occur independently of the dogmatism score of the ranker.

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[78] Sterling S. Stott, Interpersonal orientation as a function of belief content and structure. Unpublished doctoral dissertation, University of California, Los Angeles, 1963.

[79] E. P. Hollander, Authoritarianism and leadership choice in a military setting, J. soc. Psychol., 1954, 49, 365-370.

[80] William Haythorn, Arthur Couch, Donald Haefner, Peter Langham and Launor Carter, The behavior of authoritarian and equalitarian personalities in groups, Hum. Relat., 1956, 9, 57-74.

[81] At first glance, this finding may seem to be at odds with the common assumption in that authoritarians prefer authoritarian (powerful) leaders--an assumption which has received some empirical support. This apparent conflict can be largely resolved if one keeps in mind the variable

Presumably, peer preference for non-authoritarians over authoritarians stems from the tendency of the latter to behave in an overbearing manner toward those who do not hold higher status. A few empirical studies have investigated the actual behavior of authoritarians in groups of peers. One group of studies reveals that high F Scale scorers do display more hostility than low scorers toward persons whose status is not higher than their own.[82] In a different vein, Hough states that student teachers who scored high on the Dogmatism Scale showed the least development of human relations skills during a training program.[83]

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of status at the time of choice. It is one thing to nominate a peer for a leadership position, another thing to evaluate an already constituted leader. In the first case the chooser is likely to decide on the basis of personal contacts; in the second case, general attitudes toward leaders and how they should behave may influence the decision. From a study by Jones comes some indirect confirmation of this idea and how authoritarianism may relate to it. Jones discovered that high F Scale scorers showed a preference for an authoritarian leader over a non-authoritarian leader, but these same high scorers seemed to like the non-authoritarian leader personally. (Jones, op. cit.)

[82] Roberts and Jessor, op. cit.; Leonard Berkowitz and Richard M. Lundy, op. cit.; John W. Thibaut and Henry W. Riecken, op. cit.

[83] John B. Hough, The dogmatism factor in human relations training of pre-service teachers. Paper read at the annual meeting of the Amer. Educational Research Assoc., Chicago, February, 1965. A general lack of social sensi-

Further description of the effects of authoritarianism on peer interaction comes from Haythorn, *et al.*, who found that groups of high authoritarians showed less equalitarian behavior and less sensitivity toward one another than groups of low authoritarians, as measured by ratings on a check list of behaviors.[84] An interesting and conflicting finding in this study, however, was that when the observers did not use the check list, they could not distinguish between the high and low authoritarians. The investigators felt that this occurred because the observers' free impressions were influenced by the tendency of the high authoritarians to show concern about group approval.

Such a concern for approval can, of course, be viewed as another facet of the authoritarian's intense awareness of potential threat. The authoritarian is domineering only when it is "safe" to be so. This raises an interesting question about two hypotheses posed in this study. The first hypothesis is based on the concept of authoritarian submission to authority figures, i.e., the authoritarian rarely considers it safe to be other than submissive to an organizational superordinate. The second hypothesis is

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tivity and social skills has been the explanation offered by several writers for the authoritarian's unacceptability to his peers. (Hollander, *op. cit.*; Jones, *op. cit.*; Kates, *op. cit.*)

[84] Haythorn, Haefner, Couch and Carter, *op. cit.*

based on the idea that the authoritarian is aggressive toward persons who do not hold high status. If, however, a peer group is perceived as having considerable power to reward and punish, the authoritarian may find it necessary to curry favor in that setting too by very submissive behavior. In other words, we may very well require some information about how the group is perceived in order to predict which of his two characteristic behaviors--submission or aggression--the authoritarian will display. Such information has not been obtained in this study. Instead, the assumption has been that, *generally speaking*, elementary school staffs are not such powerful groups that their ability to reward and punish will constitute a threat in the eyes of an authoritarian, and so inhibit his overbearing behavior with peers. It may be necessary to modify this assumption, but findings of studies reported so far do not clearly indicate which specific group conditions are associated with which kind of behavior in authoritarians.[85]

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[85] The presence of group pressure toward conformity in the public expression of opinions may be one condition under which authoritarians behave submissively rather than aggressively toward peers. There is a group of studies of conformity which have proceeded by and large on the assumption that high authoritarians will be more likely to submit to this kind of peer group pressure, but the results of these studies are not all in one direction. In Asch-type conformity situations the bulk of the evidence supports this hypothesis. (Richard S. Crutchfield, Conformity and character, Amer. Psychologist, 1955, 10, 191-198; Ray R. Cunning and James M. Baker, Effect of the group in authoritarian and non-authoritarian persons, Amer. J. Psychol.,

Nor are there a great many cues as to how situational conditions such as powerlessness of the group within the organizational structure may affect group members' behavior toward one another. Some effects of threat of various sorts have been noted. Lanzetta, *et al*. report that groups under threat show less aggressive, autocratic behavior and more concern with acceptance,[86] while Pepitone and Kleiner state that threat has a depressing effect on group cohesive-

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1959, *64*, 579-581; William P. Wells, Guy Weinert and Marilyn Rubel, Conformity pressure and authoritarian personality, *J. Psychol*., 1956, *42*, 133-136.) There is evidence, however, that whether the peers are unanimous or not affects the conforming response of the authoritarian. (Ivan D. Steiner and Homer H. Johnson, Authoritarianism and conformity, *Sociometry*, 1963, *26*, 21-34.) Furthermore, some writers suggest that the relationship between authoritarianism and conformity may be curvilinear. (Jerry B. Harvey, Type of influence, magnitude of discrepancy and degree of dogmatism as determinants of conformity behavior. Unpublished doctoral dissertation, University of Texas, 1963; Elaine G. Sofer, Inner-direction, other-direction and autonomy: a study of college students. In Seymour Lipset and Leo Lowenthal (Eds.), *Culture and social character* [New York: The Free Press of Glencoe, A Division of the Crowell-Collier Publishing Co., 1961].)

The lack of agreement in these studies may be partly because the groups meant different things to the different authoritarian subjects, but no information is given as to how the groups were perceived by their members. In any event, we do not know how conforming to extreme group pressure in a small, temporary laboratory group is related to congenial social behavior in a larger, on-going group of co-workers.

[86] John T. Lanzetta, Don Haefner, Peter Langham and Howard Axelrod, Some effects of situational threat on group behavior, *J. abnorm. soc. Psychol*., 1954, *49*, 445-453.

ness.[87] It is possible to reconcile these and similar findings by postulating cohesiveness as a mediating construct between threat and aggressiveness toward peers. Both Zander[88] and Pepitone and Reichling[89] have suggested that group cohesiveness facilitates the expression of hostility. One might argue then that threat decreases cohesiveness; low cohesiveness in turn suppresses aggresive actions.

If groups do have different levels of tolerance for aggressive behavior, then it might be that the aggressive actions of authoritarians will be differentially evaluated, according to the level of tolerance of a particular group. Such interactive effects of personality and group conditions are suggested by Slater, who found that F Scale scores bore different relationships to sociometric choice in groups which varied in role specialization,[90] and by Tupes, Carp and Borg who found that peers evaluated assertiveness differently, depending on whether the group climate was predominately competitive or cooperative.[91]

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[87] Albert Pepitone and Robert Kleiner, The effects of threat and frustration on group cohesiveness, J. abnorm. soc. Psychol., 1957, 54, 24-31.

[88] Alvin Zander, Group membership and individual security, Hum. Relat., 1958, 11, 99-111.

[89] Albert Pepitone and G. Reichling, op. cit.

[90] Philip E. Slater, Role differentiation in small groups, Amer. soc. Rev., 1955, 20, 300-310.

In sum, it does seem likely that a number of other factors may affect the predicted inverse relationship between dogmatism and ranking by peers. In this study, however, the relationship will be studied in its simplest formulation, with an eye to clues for further research.

4. Cognitive Behavior Toward Authority

A. Positive and Negative Authorities

Rokeach's ideas of positive and negative authorities and the ways they function in open and closed minds have not yet been much explored. Only Vidulich seems to have tested hypotheses drawn directly from these concepts,[92] and he did not investigate the suggestion which is of interest here, namely that positive and negative authorities are more sharply separated in the closed mind than in the open mind.

Some indirect evidence bearing on this notion can be found. The original work on the authoritarian personality suggested that authoritarians are more sensitive than non-authoritarians to perceived differences along a good-bad dimension. The tendency for authoritarians to rely more heavily on an evaluative dimension in making distinctions among people has, by and large, been supported by empirical findings. For example, high ethnocentrics have been found less able than low ethnocentrics to tolerate the possible existence of both "good" and "bad" traits in one person,[93] and Paul has reported a greater discrepancy between ratings of favored and unfavored political candidates given by authoritarians than between ratings of candidates given by non-authoritarians.[94] Suci found that high ethnocentric subjects differed most from low ethnocentric subjects in their trait-list descriptions of unaccepted social groupings as opposed to more accepted social groups, although in this case, the high ethnocentric subjects did not make greater use of an evaluative factor.[95]

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[91] Ernest C. Tupes, A. Carp and Walter R. Borg, Performance in role-playing situations as related to leadership and personality measures, Sociometry, 1958, 21, 165-179.

[92] Robert N. Vidulich, An empirical analysis of the belief referents of persons with open and closed cognitive systems. Unpublished doctoral dissertation, Michigan State University, 1958.

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[93] Else Frenkel-Brunswik, Intolerance of ambiguity as an emotional and perceptual personality variable, J. Pers., 1949, 18, 108-143. For a specific test of the relationship between ethnocentrism and trait discrepancy on an evaluative dimension, see Ivan D. Steiner, Ethnocentrism and tolerance of trait "inconsistency," J. abnorm. soc. Psychol., 1954, 49, 349-354.

[94] I. H. Paul, Impressions of personality, authoritarianism, and the fait-accompli effect, J. abnorm. soc. Psychol., 1956, 53, 338-344.

[95] George J. Suci, A multidimensional analysis of social attitude with special reference to ethnocentrism. Unpublished doctoral dissertation, University of Illinois, 1952.

Also to the point is Mogar's finding that high F Scale scorers made more extreme judgments on a Semantic Differential than did low scorers, and that this tendency was greater in describing controversial concepts.[96] In sum, while there is no direct evidence on the hypothetical difference between the ways in which open and closed minds see positive and negative authorities as they are defined by Rokeach, there is some empirical basis for entertaining the idea that closed minds may be prone to make sharper distinctions than open minds between what is accepted and what is not accepted.

The second prediction about positive and negative authorities in this study is that there will be an association between the degree to which principals are seen as positive authorities and the dogmatism of the teachers who describe them. This prediction is based on the assumption that the closed-minded person cannot tolerate a negative perception of an organizational superordinate with whom he is in close contact. While evidence has been cited which bears on the tendency of authoritarians to describe higher status figures in a generally favorable light, there seems to have been little study of the combined effects on perception of, 1) initial disagreement with a higher status person, and 2) presence or absence of that higher status person. Harvey and Beverly reported that, after contact with a high status speaker who espoused views in disagreement with their own, authoritarians changed their opinions more than did non-authoritarians to match the opinions of the speaker.[97] But, while this seems to indicate submission to a present authority, it does not tell us how the authoritarian subjects perceived the high status figure. Again we can only infer that in the closed mind the act of submission to authority brings about a positive perception of that authority.

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[96] Robert E. Mogar, Three versions of the F Scale and performance on the Semantic Differential, J. abnorm. soc. Psychol., 1960, 60, 262-265.

The concept of cognitive dissonance may be useful here. Submitting to a person with whom one disagrees involves dissonant cognitions. It may be that different types of personality structure affect the amount of dissonance which the individual can tolerate.[98] Fillenbaum[99] and Wrenn[100] found evidence to suggest that highly dogmatic subjects have a low tolerance for cognitive dissonance. If, indeed, the dogmatic person feels great pressure to resolve dissonance, it seems likely that when faced with an authority figure with whom he disagrees, his attempt at dissonance reduction would take the form of revising his evaluation of the authority figure. Such about-face behavior is theoretically typical of the closed mind, where cognitions are changed as a result of perceived threat rather than from logical requirements. The alternative method of reducing dissonance by refusing to submit would require that the dogmatic person ignore the threat represented by the authority figure, and this is presumably very difficult for him.[101]

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[97] Harvey and Beverly, op. cit.

[98] Festinger alluded to the possibility of individual differences in his introduction of this theory. (Leon Festinger, A theory of cognitive dissonance [Evanston, Ill.: Row, Peterson & Co., 1957] p. 266.) Brehm and Cohen have enlarged upon the potential effects of personality. (Jack W. Brehm and Arthur R. Cohen, Explorations in cognitive dissonance [New York: John Wiley & Sons, Inc., 1962], pp. 171-177.)

[99] Samuel Fillenbaum, Dogmatism and individual differences in reduction of dissonance, Psychol. Rep., 1964, 14, 47-50.

[100] Wrenn, op. cit.

Recently Rokeach has suggested a similarity between the concept of positive and negative authorities and that of reference groups.[102] Vidulich has followed up this idea with an effort to reformulate the concept of reference groups within a framework of cognitive behavior based upon reliance on authority.[103] As yet, however, the relationship between these two concepts has not been well worked out.

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[101] There is, of course, another alternative. The person may leave the situation which creates the dissonance.

[102] Rokeach, The three Christs of Ypsilanti, pp. 190-194.

[103] Vidulich, op. cit.

B. Absolute and Rational Reliance on Authority

Perhaps the most commonly accepted distinction between the authoritarian and the non-authoritarian personality, so far as cognitive behavior is concerned, is that the authoritarian relies upon absolute, arbitrary authority, while the non-authoritarian relies upon relative, rational authority. This distinction has been incorporated into broader models of personality organization. Harvey, Hunt, and Schroder, for example, define their lowest level of cognitive functioning primarily in terms of absolute reliance upon external authority, and they specifically relate this level to the authoritarian personality.[104] In an even more general framework, Kelly takes account of this distinction when he discusses ways in which personal constructs are altered and generalized.[105]

Empirical study, however, of the cognitive behaviors associated with absolute and rational reliance on authority has been meager. Several investigations call into question certain assumptions that have gone hand-in-hand with the notion of reliance on absolute authority. One investigator has reported no correlation between authoritarianism and the acceptance of irrational authority.[106] The well-known argument that authoritarians employ stereotypes more than do non-authoritarians has also been challenged; instead, it is suggested, stereotypes simply differ for the two types of personality.[107]

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[104] Harvey, Hunt and Schroder, op. cit., pp. 217-218.

[105] Kelly, op. cit., Chap. 2.

On the other hand, Powell has tested Rokeach's contention that absolute reliance on authority is marked by an inability to distinguish the content of information from the source of that information, and his results substantiate the hypothesis.[108] Steiner and Johnson found that authoritarians were more likely than non-authoritarians to maintain good opinions of initially attractive persons after hearing derogatory information about them.[109] In a rather large number of studies, one type of possibly relevant behavior has been found to distinguish authoritarians from non-authoritarians: authoritarians make less varied judgments in estimating the F Scale responses of other people.[110]

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[106] Stanley A. Rudin, The relationship between rational and irrational authoritarianism, J. Psychol., 1961, 52, 179-183.

[107] For example: Alvin Scodel and Maria L. Freedman, Additional observations on the social perceptions of authoritarians and non-authoritarians, J. abnorm. soc. Psychol., 1956, 52, 92-95; Milton E. Lipetz, The effects of information on the assessment of attitudes by authoritarians and non-authoritarians, J. abnorm. soc. Psychol., 1960, 60, 95-99.

[108] Fredric A. Powell, Open- and closed-mindedness and the ability to differentiate source and message, J. abnorm. soc. Psychol., 1962, 65, 61-64.

[109] Ivan D. Steiner and Homer H. Johnson, Authoritarianism and "tolerance of trait inconsistency," J. abnorm. soc. Psychol., 1963, 67, 388-391.

It is difficult to assess the available evidence, partly because of the variety of indices used to tap the absolute-relative dimension. Also, if the phenomenon of positive and negative catagories of authority does occur, it must be taken into account to avoid confusion. Thus, descriptions of others given by authoritarians might be more varied than descriptions given by non-authoritarians if some of the persons described were seen as positive, some as negative. But if all the persons described were seen either as positive or as negative, then authoritarians might give less varied descriptions. It is this possible difference in description--giving behavior which will be investigated in this study.

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[110] For example: W. H. Crockett and Thomas Meidinger, Authoritarianism and interpersonal perception, *J. abnorm. soc. Psychol.*, 1956, *53*, 378-380; Kates, *op. cit.*; William Rabinowitz, A note on the social perceptions of authoritarians and nonauthoritarians, *J. abnorm. soc. Psychol.*, 1956, *53*, 384-386; A. Scodel and P. H. Mussen, Social perceptions of authoritarians and nonauthoritarians, *J. abnorm. soc. Psychol.*, 1953, *48*, 181-184.

CHAPTER III

PROCEDURE

1. Sample

The population of interest consisted of elementary school staffs. The sample used in the study was made up of teachers and principals in 43 public schools from 10 districts and one private school, all in the Los Angeles metropolitan area, making a total of 44 schools. Some demographic characteristics of the school areas are given in Appendix I.

From the 44 schools, the responses of 759 individuals were obtained. There were a total of 869 teachers and principals in the 44 schools. Forty-four of these individuals were principals; 825 were teachers. All of the principals in the sample schools participated, but the 715 teachers included in the sample are less than the total number of teachers because some teachers were absent from school during the period of data collection. That is, except for the essentially random absences of some teachers, the sample of individuals includes all of the teachers and principals in the sample of schools. The number of respondents from each school varied from 10 to 32. The mean number of respondents was 17.

2. Instruments

A. Dogmatism Scale

To obtain the dogmatism scores for the individual subjects, Form E of Rokeach's Dogmatism Scale was used. A copy of the form which was administered is found in Appendix II.

Test-retest data over a 3-month interval was obtained for the Dogmatism Scale from 23 elementary school teachers in a school not included in the study. The stability coefficient computed from this data was .81.

B. School Description Scale

To assess the amount of decision-making power which the teachers in any school felt they possessed, a School Description Scale was constructed. This scale consisted of 14 items which cover various areas of decision-making important to the professional life of teachers. The form of the School Description Scale which was used in the study, along with a description of its construction, is found in Appendix III.

The stability of the mean score for a school on this instrument was estimated by collecting retest data on the School Description Scale from 24 schools in the sample approximately 10 months after the first administration.

The correlation obtained between first and second school mean scores was r=.65.

C. Rankings of Teachers as Co-Workers

It was essential to obtain some index of principals' perceptions of teachers and teachers' perceptions of one another as easy to work with or hard to work with. Consequently, each of the 759 subjects was asked to rank the co-workers in his school on a six step scale, ranging from easiest to work with to hardest to work with. This was done in a way which preserved the anonymity of the subjects. The scale and instructions are reproduced in Appendix IV.

D. Semantic Differential

The Semantic Differential technique was used to obtain the reactions of the subjects to various authorities. Authorities were defined according to Rokeach, as potential sources of information, and became the concepts used on the Semantic Differential. Subjects were instructed to think of each concept as a source of information. The 15 concepts were selected, partially on the basis of a pre-test, to represent four potential dimensions: positive and negative authorities, present and absent authorities, authorities of high, equal and lower status, and personal and impersonal authorities.

Seven-step bipolar adjective scales were used to describe each concept. Fifteen of these scales were selected, partially on the basis of a pre-test and with several criteria in mind. The two most important criteria were that the scales be relevant to the purpose of the study and that the scales allow the subjects to display individual differences with respect to their reactions toward the concepts (authorities). The form of the Semantic Differential which was administered, along with more details concerning the pre-test is found in Appendix V.

E. Background Information

Some professional background information on the 759 subjects was also obtained. The specific questions that were asked are found in Appendix VI.

3. Collection of Data

The first step in collection of data was to contact a number of district superintendents from the greater Los Angeles area. Initial contact was made with 20 superintendents either by mail or by telephone. All of the contacts resulted in a positive response from the superintendents regarding the study, however, 10 of the superintendents stated that they could not readjust the schedule of their schools with sufficient speed to include them in the administration of instruments. Consequently, only 10 districts participated in the study.

After the superintendent of a district had given permission for schools to be used, the principals of the schools for which permission had been obtained were contacted by phone, and arrangements were made for the investigator to visit the school and obtain data from the entire staff at one time. The investigator went to each school and administered the various instruments to the staff. First the subjects were told that they were participating in a study of teacher attitudes and that the nature of the study was such that a more exact description could not be given to them at that time without biasing the responses. They were promised that at the conclusion of the study they would receive a report of the findings. Then the instruments were administered to the subjects in the following order:

Background Information
School Description Scale
Dogmatism Scale
Ranking of Co-Workers
Semantic Differential

Just previous to the administering of the instruments a temporary number code was established to identify subjects. This was done so that the subjects would remain completely anonymous. The code consisted of the names of the various staff members, along with arbitrarily chosen identifying numbers, written on a chalk board. Each subject marked his paper with his own number, and on the sociometric ranking referred to other staff members by their numbers. At the conclusion of the data collection, the chalkboard was wiped clean.

In 26 of the 44 schools, immediately after administering the instruments, the investigator wrote a brief paragraph describing general impressions of the testing session, the staff, school atmosphere, etc. These descriptions followed no preestablished pattern, and the 26 schools were not selected on any predetermined basis. The original plan had been to collect some kind of purely impressionistic information on all schools, but scheduling problems did not allow time for this write-up in many of the schools (Appendix VII).

CHAPTER IV

RESULTS

The analysis of the data will be presented in terms of the predictions which it was designed to test.

> Prediction 1: Dogmatism in the teacher will be positively related to high rating on congeniality as a co-worker received from a principal. a) This relationship will be stronger when the principal is dogmatic than when the principal is nondogmatic. b) This relationship will be weaker when teachers as a group within the social system of the school have relatively little decision-making power. c) With principal's dogmatism and teachers' powerlessness combined to form four school environments, the strength of the relationship in these environments will be ordered as follows:

Autonomous teachers and Dogmatic principal	>	Autonomous teachers and Nondogmatic principal	=	Powerless teachers and Dogmatic principal	>	Powerless teachers and Nondogmatic principal

Results: Main Statement

Responses to the Dogmatism Scale were given in terms of a 6-point scale, ranging from "strongly disagree" (-3) to "strongly agree" (+3), with no neutral category. (See

Appendix II.) Responses were scored on a 1-7 scale by adding a constant of 4 to each item and assigning a score of 4 to items which were left unanswered. Almost all subjects answered all the items. Only twenty-four subjects failed to answer more than three-fourths of the items. Higher scores indicated higher agreement with items, and so, presumably, higher dogmatism. The dogmatism scores ranged from 63 to 218, with a mean of 141.13 and standard deviation of 26.15. A histogram of dogmatism scores showed a clearly normal distribution.

On the 6-step scale which had been used to rank co-workers, a score of 6 was assigned to the top step, meaning "easiest-to-work-with," a score of 5 to the next lowest step, and so on, down to a score of 1, meaning "hardest-to-work-with." Principals followed the instructions fairly closely, and divided their teachers into six approximately equal groups. (The mean rank assigned by principals was 3.69; the standard deviation was 1.83.)

Two general types of analysis were performed to test the main statement of the prediction. The first type of analysis tested schools as the units of analysis. Pearson product-moment correlations in each of the 44 schools between teachers' dogmatism scores and ranks received from principals are shown in Table 1, Column 3. The median correlation is .026. Only 6 of these correlations were found to be significantly different from zero.

TABLE 1

SCHOOLS ORDERED BY CORRELATION COEFFICIENTS BETWEEN DOGMATISM SCORES OF TEACHERS AND RATINGS RECEIVED FROM PRINCIPALS

Col.1 School	Col.2 N (teachers)	Col.3 r	Col.4 Dogmatism Score of Principal[a]	Col.5 Teacher Power Mean Score[b]
PD	12	$-.706^c$	D	A
AA	13	$-.535^c$	N	A
SH	17	$-.488^c$	D	A
DD	18	$-.488^c$	D	A
NB	17	-.389	D	A
DK	13	-.372	D	P
SA	15	-.339	N	A
MA	14	-.333	N	A
PE	20	-.305	D	P
SD	18	-.252	D	P
DG	18	-.249	D	P
ND	25	-.215	N	P
DF	20	-.211	N	A
SE	12	-.170	D	A
SC	19	-.143	N	P
NA	20	-.096	D	P
PB	12	-.068	N	P
MB	18	-.047	D	P
DH	18	-.037	N	A
SG	30	-.024	N	P
AB	14	-.001	D	P
XA	14	.000	D	P
SB	16	.051	D	P
PF	24	.065	D	A
PC	15	.070	D	A
MD	17	.076	N	P
RA	11	.093	D	A
DJ	15	.121	N	P
DC	15	.128	D	A
BB	11	.156	N	A
PA	10	.161	D	A
LA	15	.212	N	A
SI	30	.246	N	A
OA	16	.258	N	A

TABLE 1 (Continued)

Col.1 School	Col.2 N (teachers)	Col.3 r	Col.4 Dogmatism Score of Principal[a]	Col.5 Teacher Power Mean Score[b]
MC	13	.270	N	A
SF	23	.270	D	P
DB	18	.329	D	P
NC	23	.331	N	P
OB	12	.376	N	P
DA	16	.429	D	A
LI	15	.430	N	P
DE	15	.444	D	P
BA	11	.650[c]	N	A
DL	11	.671[c]	N	P
			$N_D = 23$	$N_A = 22$
			$N_N = 21$	$N_P = 22$
			$U_N = 156.5$	$U_A = 277.5$
			$z = -2.00$	$z = -.833$
			$p < .05$	Not significant

a) "D" designates schools in which the principal's dogmatism score fell above the mean score for principals, i.e. > 138.56.
"N" designates schools in which the principal's dogmatism score fell below the mean.

b) "A" designates schools in which the mean teacher power score (School Description Scale) was above the median score for all schools, i.e. > 8.60.
"P" designates schools in which the mean power score was below the median score.

c) $p < .05$, two-tailed test. Although direction was predicted in the hypotheses, this study was primarily an exploratory one which took into account only a few of the possibly relevant variables. For this reason, two-tailed tests were used throughout the analyses in hope of picking up clues to guide further investigation.

In the second type of analysis, individual teachers were treated as the units for analysis. Forty-four teachers who did not fill out the Semantic Differential were eliminated from the study. Tests were performed across the remaining sample of 670 teachers. A Pearson product-moment correlation coefficient was computed to assess the linear relation between the dogmatism scores for the 670 teachers and the ranks they had received from principals. The correlation so obtained was -.015, not significantly different from zero.

The high scorers and the low scorers on the Dogmatism Scale were also examined separately. High scorers were defined as those subjects whose scores were one standard deviation or more above the sample mean; low scorers were those whose scores were equal to or lower than one standard deviation below the mean. Table 2 summarizes the information. There were no significant differences among groups on mean ratings received from principals. While the high scoring group showed no relationship between dogmatism scores and rankings received from principals, the low scoring group did show a relationship in the predicted direction, which approached significance ($r=.178$, $p<.07$). The difference between the correlations for the two groups, however, is not large enough to allow an interpretation of difference based on dogmatism scores.

TABLE 2

COMPARISON OF HIGH AND LOW DOGMATISM SCALE SCORERS ON RATINGS RECEIVED FROM PRINCIPALS

Teachers	N	Dogmatism Score Mean	S.D.	Rating From Principal Mean	S.D.	Correlation Between Dogmatism Scores and Ratings From Principals
High scorers	110	181.78	11.85	3.69	1.77	-.022
Low scorers	103	101.54	12.63	3.80	1.77	.178
Total sample	670	141.13	26.15	3.68	1.83	-.015

Although the school correlation coefficients had not supported the prediction of one overall relationship, the range of these correlations suggested that different relationships between the variables might occur in different school situations. To investigate this possibility, an analysis was made of the impressionistic accounts which had been written after administering the instruments in 26 of the schools. (See Appendix VII.) Four judges who had teaching experience but were uninformed about this study, read these accounts and independently rated each school on a simple 5-point scale constructed in the following way:

1	2	3	4	5
Troubled; staff feels insecure; lack of trust				Happy; staff feels secure; mutual trust

The average rating for each school was obtained, and these ratings were correlated with the teacher dogmatism score-principal rating correlations for the schools, which were again treated as scores. The resulting correlation coefficient was $r=-.553$, which is significant beyond the .01 level. (See Table 3.) This correlation strongly suggests that large negative relationships between teacher dogmatism scores and principal's ratings tend to occur in schools where the staff can be described as happy and secure. Large positive relationships between the variables

TABLE 3

RATINGS OF 26 SCHOOLS ON A "TROUBLED-HAPPY" SCALE BY 4 JUDGES; CORRELATION BETWEEN THESE RATINGS AND THE PRINCIPAL RATING-TEACHER DOGMATISM SCORE CORRELATIONS

	Ratings by Judges on "Troubled-Happy" Scale[a]					
School	Judge 1[b]	Judge 2	Judge 3	Judge 4	Average Rating	Principal Rating--Dogmatism Score Correlation for School
DB	1	1	1	1	1.00	.329
DI	1	1	2	1	1.25	.430
BA	1	2	2	2	1.75	.650
DG	1	2	2	2	1.75	-.249
DL	2	3	2	1	2.00	.671
RA	1	2	3	2	2.00	.093
LA	2	2	3	2	2.25	.212
DA	2	3	3	2	2.50	.429
SF	2	3	3	2	2.50	.270
MA	2	3	3	2	2.50	-.096
DE	3	2	4	2	2.75	.444
PB	3	3	3	2	2.75	-.068
MB	3	3	4	2	3.00	-.047
PC	3	5	3	3	3.50	.070
PA	4	4	4	3	3.75	.161
PE	3	4	4	4	3.75	-.305
SA	4	5	3	3	3.75	-.339
DH	4	5	4	4	4.25	-.037
DF	4	5	3	5	4.25	-.211
DK	4	5	5	3	4.25	-.372

TABLE 3 (Continued)

School	Ratings by Judges on "Troubled-Happy" Scale[a]				Average Rating	Principal Rating--Dogmatism Score Correlation for School
	Judge 1[b]	Judge 2	Judge 3	Judge 4		
MC	5	3	5	5	4.50	.270
OA	5	4	4	5	4.50	.258
DJ	5	4	4	5	4.50	.121
NB	4	5	4	5	4.50	-.389
DC	5	5	4	5	4.75	.128
DD	5	5	5	4	4.75	-.488

N = 26

$r = -.553$

$p < .01$

[a] The "troubled" end of the scale is indicated by a score of 1; the "happy" end, by a score of 5.

[b] The ratings given by each judge were converted into ranks and a Kendall coefficient of concordance was computed to assess the agreement among ratings given by the different judges. Using the correction for tied ranks, W = .973, $p < .001$.

seem to be associated with schools where the staff can be described as troubled and insecure.

Results: 1(a)

Schools were the logical units for analysis to test this prediction. Table 4 shows the 44 schools ordered by the dogmatism scores of the principals. The mean dogmatism score of principals (138.56) was not significantly different from the mean score for teachers (141.13).

Two analyses were performed to test the prediction. First, the school correlation coefficients between dogmatism scores of teachers and ratings received from principal were treated as scores, and these scores were correlated with dogmatism scores of principals. The correlation obtained, r=.368, is significant at the .02 level, and indicates that the higher the dogmatism score of the principal, the more likely it is that he will give lower ratings to teachers with higher dogmatism scores. This relationship is opposite in direction to that predicted for the association among the variables.

A second analysis confirmed these results. After ranking schools according to the size of the correlation coefficient between teacher dogmatism scores and ratings received from principals, schools were divided into two groups--those with principals who had dogmatism scores above the mean for all principals and those with principals

TABLE 4

SCHOOLS ORDERED BY DOGMATISM SCORES OF PRINCIPALS

School	Dogmatism Score of Principal	Correlation Between Teachers' Dogmatism Scores and Principal's Ratings
PA	174	.161
SB	172	.051
PF	169	.065
NB	165	-.389
SE	164	-.170
DK	163	-.372
DD	162	-.488*
DC	159	.128
PC	158	.070
NA	156	-.096
SH	156	-.488*
SF	152	.270
DB	150	.329
SD	150	-.252
AB	149	-.001
PE	147	-.305
DG	145	-.249
PD	145	-.706*
MB	144	-.047
RA	143	.093
DA	142	.429
DE	142	.444
XA	142	.000
DF	141	-.211
MA	139	-.333
MD	137	.076
MC	136	.270
SA	136	-.339
SG	134	-.024
PB	132	-.068
DH	128	-.037
AA	127	-.535*
DI	127	.430
ND	124	-.215

TABLE 4 (Continued

School	Dogmatism Score of Principal	Correlation Between Teachers' Dogmatism Scores and Principal's Ratings
SI	124	.246
BA	122	.650*
NC	122	.331
OA	122	.258
LA	120	.212
OB	118	.376
DJ	116	.121
SC	104	-.143
DL	99	.671*
BB	89	.156
	M = 138.56	
	S.D. = 20.49	

* $p < .05$, two-tailed test of hypothesis $p = 0$

who had dogmatism scores below the mean. (Table 1, Column 4.) A Mann-Whitney U test was then made to compare the ranks of the two groups. This test again revealed a significant tendency ($z=2.00$, $p < .05$) for higher dogmatism scores in principals to be associated with higher ratings given to teachers with lower dogmatism scores.

Results: 1(b)

The amount of decision-making power held by teachers in a school was denoted by the mean score on the School Description Scale for that school. To test the prediction concerning the effect of powerlessness of teachers on the relationship between teachers' dogmatism scores and ratings received from principals, schools were first ordered on the basis of their mean teacher power scores, as shown in Table 5. An inspection of this table revealed no easily interpretable pattern, although it is interesting to note that most of the significant correlations occurred in schools just above the middle of the range of power scores.

A Mann-Whitney test was performed by dividing schools into two groups, according to whether they fell above or below the median teacher power score of 8.60 for all schools in the sample, then assigning ranks to the intermingled groups on the basis of their teacher dogmatism score-principal rating correlations (Table 1, Column 5). The difference in ranks of the two groups was not significant. There

TABLE 5

SCHOOLS ORDERED BY MEAN POWER SCORE OF TEACHERS

School	Mean Power Score	Correlation Between Teachers' Dogmatism Scores and Principal's Ratings
LA	10.93	.212
MA	10.57	-.333
SE	10.50	-.170
PF	10.24	.065
MC	10.15	.270
PC	10.14	.070
OA	10.11	.258
BB	10.00	.156
RA	9.82	.093
PA	9.80	.161
SA	9.60	-.339
DH	9.39	-.037
NB	9.33	-.389
SH	9.18	-.488*
DC	9.13	.128
DD	9.06	-.488*
SI	8.86	.246
BA	8.82	.650*
DF	8.78	-.211
AA	8.77	-.535*
DA	8.69	.429
PD	8.64	-.706*
DJ	8.56	.121
SG	8.53	-.024
MB	8.41	-.047
DG	8.33	-.249
XA	8.21	.000
SC	8.17	-.143
AB	8.14	-.001
SB	8.12	.051
DK	8.08	-.372
PB	8.08	-.068
DL	7.91	.671*

TABLE 5 (Continued

School	Mean Power Score	Correlation Between Teachers' Dogmatism Scores and Principal's Ratings
SD	7.61	-.252
DE	7.60	.444
NA	7.60	-.096
PE	7.60	-.305
MD	7.59	.076
SF	7.14	.270
NC	7.09	.331
OB	7.03	.376
DI	6.79	.430
DB	5.94	.329
ND	5.72	-.215
	Median = 8.60	

* p = .05, two-tailed test of hypothesis p = 0.

was, then, no demonstration that the amount of power held by teachers as a group had any clear effects on the association between teacher dogmatism scores and principals' ratings.

Results: 1(c)

To test the independence of the two dimensions of school environment postulated in this prediction, a correlation coefficient was computed between principals' dogmatism scores and the mean teacher power scores of their schools. The correlation was not significantly different from zero (r=.120).

The four school climates were defined in terms of scores:

A-P dimension: A--school mean power score above the median score for all schools.

P--school mean power score below the median score for all schools.

D-N dimension: D--principal's dogmatism score above the mean score for all principals.

N--principal's dogmatism score below the mean score for all principals.

With these definitions, schools in the four environments can be identified from Table 1, Col. 4 and Col. 5. Schools were grouped in the four environments, and ranks were assigned to each of the cells, according to the expected size in that cell of the correlation coefficient between teachers' dogmatism scores and ratings from principal. Thus, cell AD received a rank of 3, cells AN and PD, a rank of two, and cell PN, a rank of one. (See Table 6.) Then, treating school correlations as scores, a Pearson product-moment correlation coefficient was computed between these scores and the ranks of the cells in which they fell. The correlation so obtained, $r=-.240$, was not significant ($p < .20$).

To investigate further, a correlation was obtained between teacher dogmatism scores and principals' ratings for each cell by computing across all schools in that cell. Again the correlation coefficients were very low, and failed to reveal any significant relationship in any cell or any significant differences among cells (Table 7). There was, then, no support found for this prediction.

Although no extensive analysis could be made of how the dimensions of principal's dogmatism and teachers' power might be related to the "happy-troubled" school dimension, a preliminary check was attempted. The correlations of each of the two predicted variables with the unpredicted "happy-troubled" variable were obtained for those 26 schools for which "happy-troubled" ratings were available. The correlation between principals' dogmatism scores and the ratings was not significant, $r=.260$. The correlation between teachers' power scores and the ratings was $r=.506$, $p < .02$, and

TABLE 6

SCHOOLS GROUPED ACCORDING TO FOUR HYPOTHETICAL ENVIRONMENTS WITH EXPECTED CELL RANKS AND PRINCIPAL RATING-TEACHER DOGMATISM CORRELATIONS FOR THE SCHOOLS

	A		P	
	A D	Rank=3	P D	Rank=2
D	PD -.706 DD -.488 SH -.488 NB -.389 SE -.170 PF .065	PC .070 RA .093 DC .128 PA .161 DA .429	DK -.372 PE -.305 SD -.252 DG -.249 NA -.096 MB -.047 AB -.001	XA .000 SB .051 SF .270 DB .329 DE .444 DL .671
	A N	Rank=2	P N	Rank=1
N	AA -.535 SA -.339 MA -.333 DF -.211 DH -.037	LA .212 SI .246 DA .258 MC .270 BA .650	ND -.215 SC -.143 PB -.068 SG -.024 MD .076	DJ .121 NC .331 OB .376 DI .430

TABLE 7

PRINCIPAL RATING--TEACHER DOGMATISM SCORE CORRELATIONS ACROSS TEACHERS AND PRINCIPALS IN THE FOUR HYPOTHETICAL SCHOOL ENVIRONMENTS

	A	P
D	N=164 r=-.046	N=192 r=.024
N	N=159 r=-.020	N=155 r=-.039

indicates a tendency for "happy" school ratings to be associated with higher power scores.

> **Prediction 2**: Dogmatism in the teacher will be negatively related to high rating on congeniality as a co-worker received from peers.

Results

As with the first prediction, this prediction was tested both with schools as the units of analysis and with individual teachers as the units of analysis.

Schools were ordered in terms of the correlation between teachers' dogmatism scores and mean ratings received from peers, as shown in Table 8. The range of correlations was similar to that of the correlations between teachers' dogmatism scores and principals' ratings, and again the median correlation was close to zero ($r=-.037$).

Looking across schools, the picture was only slightly different. For all teachers, the correlation between dogmatism scores and mean rating received from peers was $r=-.064$. For 670 subjects this correlation approaches significance ($p < .06$) in the predicted direction, but it does not suggest a substantial relationship. The agreement between peer ratings and principals' ratings for the whole sample was $r=.357$.

Although the prediction did not take into account any effects of the relative power of teachers as a group, the

TABLE 8

SCHOOLS ORDERED BY CORRELATION COEFFICIENTS BETWEEN DOGMATISM SCORES OF TEACHERS AND MEAN RATINGS RECEIVED FROM PEERS

Col.1 School	Col.2 N (teachers)	Col.3 r	Col.4 Mean Power Score[a]
DD	18	-.548[b]	A
NB	17	-.504[b]	A
PD	12	-.504	A
PB	12	-.476	P
DC	15	-.431	A
SE	12	-.417	A
PA	10	-.416	A
AA	13	-.405	A
AB	14	-.384	P
DK	13	-.309	P
ND	25	-.300	P
NA	20	-.281	P
PC	15	-.277	A
SG	30	-.267	P
MC	13	-.186	A
DG	18	-.176	P
SI	30	-.148	A
SH	17	-.146	A
LA	15	-.128	A
MA	14	-.080	A
DE	15	-.057	P
DH	18	-.037	A
SC	19	-.037	P
NC	23	-.025	P
SD	18	-.023	P
RA	11	.038	A
XA	14	.059	P
DA	16	.073	A
OA	16	.091	A
BB	11	.094	A
SB	16	.117	P
DF	20	.141	A

TABLE 8 (Continued)

Col.1 School	Col.2 N (teachers)	Col.3 r	Col.4 Mean Power Score[a]
DB	18	.149	P
BA	11	.158	A
PF	24	.160	A
MD	17	.264	P
SF	23	.275	P
PE	20	.348	P
DI	15	.372	P
OB	12	.425	P
DJ	9	.432	P
MB	18	.496[b]	P
DL	11	.514	P
SA	15	.521[b]	A
			$N_A = 22$
			$N_P = 22$
			$U_A = 242$
			$z = 1.64$
			$p < .10$

[a] "A" indicates schools in which the mean power score of teachers was above the median power score for all schools.

"P" indicates schools in which the mean power score of teachers was below the median power score for all schools.

[b] $p < .05$.

possibility of such an effect was considered. A Mann-Whitney test, similar to that performed for Prediction 1(b) was carried out. Schools were again divided into two groups--those above the median and those below the median of school mean teacher power scores, and ranks were assigned according to the size of the school correlation between dogmatism scores and peer ratings (Table 8, Col. 4). This test showed no significant difference between the two groups ($z=1.64$, $p < .10$).

> Prediction 3(a): In response to a Semantic Differential in which concepts to be rated consist of various authorities found in the school setting, dogmatic teachers and principals will differentiate more sharply between descriptions of positive authorities and descriptions of negative authorities than will nondogmatic teachers and principals.

Results

The chief problem in testing this prediction was to arrive at definitions of positive authorities and negative authorities. An arbitrary decision was made to use one scale on the Semantic Differential as the basis for this distinction. The "correct-incorrect" scale was chosen because it seemed to meet the criterion put forth by Rokeach--positive authorities are correct, negative authorities are incorrect. Consequently, all the analyses of the Semantic Differential were based on grouping for each subject those concepts which he marked as 1) correct, 2) incorrect, and 3) neutral (that is, in the midpoint) on the correct-incorrect scale.

Once positive and negative concepts had been determined on the basis of the correct-incorrect scale, the difference between positive and negative authorities was computed for each subject by measuring the difference between every possible pair of positive and negative authorities on every scale of the Semantic Differential, then taking the mean of these differences as the total positive-negative difference score. The higher the mean difference score, the greater the difference in descriptions of positive versus negative authorities.

The entire sample of teachers could not be used for this analysis because only 428 teachers marked as many as one concept on the negative end of the correct-incorrect scale. The results of the analysis of mean differences between descriptions of positive and negative authorities for the teachers who did indicate at least one negative authority are shown in Table 9. It is clear that neither the correlation coefficients between dogmatism scores and positive-negative difference scores, nor the comparison of means between high and low dogmatism scale scorers reveals any significant association of dogmatism scores and sharper distinction between positive and negative authorities.

TABLE 9

DIFFERENCE SCORES BETWEEN DESCRIPTIONS OF POSITIVE AND NEGATIVE AUTHORITIES

	Total Sample (N=428)	High Dogmatism Scorers (N=70)	Low Dogmatism Scorers (N=62)
Mean Positive-negative Difference Score	2.14	2.18	2.16
Standard Deviation	.83	.70	.69
Correlation Between Dogmatism Score and Positive-Negative Difference Score	r=.043	r=.160	r=-.020

There was, however, some indirect evidence that high dogmatism scorers will make this sharper distinction. The idea of a greater difference between descriptions of positive and negative authorities is ultimately based on the assumption that high dogmatism scorers will check more extreme points on the Semantic Differential scales and that these scales will be used in reverse orders for positive and for negative authorities. A partial test was made of the thesis that high dogmatism scorers do use extreme scale points more than low dogmatism scorers. If more extreme scale positions are checked by a particular group, then the standard deviations of scale scores for that group should be greater. The standard deviations on all scales for the concept PRINCIPALS were compared for high and low dogmatism scorers. A Wilcoxon matched-pairs signed-ranks test showed that larger standard deviations occurred for the high dogmatism scorers beyond the .01 level of significance (Table 10). This suggests that the distinction between positive and negative authorities based only on the "correct-incorrect" scale may have been an inadequate definition; and that if valid categories of positive and negative authorities could be determined, the extreme scoring pattern of high dogmatism scorers would yield greater differences between descriptions of positive and negative authorities.

TABLE 10

WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST ON THE STANDARD DEVIATIONS OF HIGH AND LOW DOGMATISM SCORERS ON THE SEMANTIC DIFFERENTIAL SCALES FOR THE CONCEPT "PRINCIPALS AS A SOURCE OF INFORMATION"

Scale	High Dogmatism Scorers S.D.	Low Dogmatism Scorers S.D.	Direction of Difference	Magnitude of Difference	Rank of Difference
Believable-Unbelievable	1.30	.98	+	.32	13
Unreliable-Reliable	1.56	1.41	+	.15	8
Stubborn-Reasonable	1.79	1.49	+	.30	12
Correct-Incorrect	1.18	1.06	+	.12	7
Unimportant-Valuable	1.50	1.01	+	.49	15
Exciting-Dull	1.43	1.53	-	.10	5.5
Safe-Dangerous	1.28	1.36	-	.08	4
Complex-Simple	1.82	1.83	-	.01	1.5
Wrong-Right	1.29	1.06	+	.23	10
Strong-Helpless	1.52	1.25	+	.27	11
Devoted-Unconcerned	1.36	1.18	+	.18	9
Unpredictable-Predictable	1.87	1.39	+	.48	14
Wise-Foolish	1.21	1.18	+	.03	3
Impulsive-Restrained	1.73	1.63	+	.10	5.5
Accurate-Inaccurate	1.09	1.10	-	.01	1.5

$N = 15$

$T = 12.5$

$p < .01$

The principals were treated as a separate group throughout the analysis of Semantic Differential data. For 32 principals who showed at least one negative concept, the mean difference score was 2.21, with a standard deviation of .69. The correlation between dogmatism scores and difference scores was r = -.331 ($p < .06$). This correlation is significantly different from the equivalent correlation for the sample of teachers, r = .043 (Table 9). Taken at face value, this suggests that for principals, unlike teachers, high dogmatism scores are associated with less distinction among the authorities used in this Semantic Differential.

> Prediction 3(b): Dogmatism in teachers will be positively associated with their descriptions of principals as positive authorities.

Results

Again positive authority was defined in terms of the correct-incorrect scale. The correlation between dogmatism scores of teachers and scores given to the concept PRINCIPALS on the Semantic Differential correct-incorrect scale was near zero, r = .057.

Additional information was sought by testing scores of those teachers who had described PRINCIPALS as negative--i.e., had checked the "incorrect" end of the correct-incorrect scale. Only 35 teachers in the entire sample had so indicated PRINCIPALS as negative authority. A chi-square analysis was performed to test the hypothesis that there was no difference in dogmatism scores among those teachers who perceived PRINCIPALS as negative authority. Under this hypothesis an equal number of teachers would be expected to fall above and below the mean dogmatism score of the sample. The test failed to reject this null hypothesis (See Table 11). There was, therefore, no evidence that high dogmatism scorers were less apt than low dogmatism scorers to mark PRINCIPALS as negative authority.

> Prediction 4: In response to the Semantic Differential, dogmatic more than nondogmatic teachers and principals will tend to describe all positive authorities alike and all negative authorities alike.

Results

Some measure of "likeness" of descriptions had to be chosen in order to test this prediction. A coherence score was devised which, like the difference score used to test Prediction 3(a), was based on the degree to which a subject checked the same scale points for two different concepts. For each subject a coherence score was computed for all positive concepts (positive coherence) and for all negative concepts (negative coherence) in the following way. Every possible pair of the positive concepts which the subject had chosen (i.e., checked on the "correct" side of the

TABLE 11

FREQUENCIES OF A NEGATIVE "PRINCIPALS" CONCEPT AMONG HIGH AND LOW DOGMATISM SCORERS VERSUS 50-50 CHANCE EXPECTATIONS

Frequencies	High Dogmatism Scorers ($x > 141.13$)	Low Dogmatism Scorers ($x < 141.13$)	
Observed	22	13	N=35
Expected	17.5	17.5	

$\chi^2 = 2.31$ on 1 df. ($p < .20$)

TABLE 12

MEANS AND STANDARD DEVIATIONS FOR POSITIVE AND NEGATIVE COHERENCE SCORES AND INTERCORRELATIONS WITH DOGMATISM SCORES

	Total Sample	High Dogmatism Scorers[c]	Low Dogmatism Scorers[c]
Positive Coherence[a]			
N	670	110	103
M	1.07	1.10	1.03
S.D.	0.47	0.32	0.36
r	.048	-.016	-.006
Negative Coherence[b]			
N	238	47	37
M	1.46	1.50	1.44
S.D.	0.60	0.58	0.60
r	.049	.011	-.185

[a] Persons with one or fewer negative concepts are included.

[b] Persons with one or fewer negative concepts are excluded.

[c] Difference between means of high scorers and low scorers:
positive coherence, t = 1.52, not significant
negative coherence, t = 0.759, not significant

correct-incorrect scale) was compared on all scales, and the differences in the scale points chosen for the two concepts were summed. The mean of these scale point differences was the positive coherence score. Thus, a high score indicated greater variability in descriptions of all positive authorities; a low score indicated less overall difference in the way scales were used to describe positive concepts.

The same procedure was followed to obtain a negative coherence score. Here, however, the number of subjects which could be used dropped considerably. In order to compute a negative coherence score, more than one negative authority is needed. Out of the entire sample only 238 teachers indicated more than one negative concept. The subgroups of high dogmatism scorers and low dogmatism scorers were, of course, also decreased in size for this analysis.

The information on positive and negative coherence scores appears in Table 12. Neither the difference between means nor the correlations with dogmatism scores reveals any significant association between dogmatism scores and tendency to describe either positive or negative authorities alike.

When the coherence scores of the 44 principals were analyzed, the correlations of these scores with dogmatism scores were also low and not significant. For positive coherence scores, the correlation with dogmatism was r=-.10. For negative coherence scores, the correlation was r= .296 (N= 19, due to lack of subjects with more than one negative concept).

Prediction 4 is therefore not supported by the findings.

Additional Findings

Individual teacher's perception of power

The only score from the School Description Scale which was used in this study was the mean score for teachers in each school. This mean score was treated as an index of the amount of decision-making power held by teachers as a group in the school. Obviously, however, the power scores can also be viewed as individual perceptions of the power of teachers, and as such, they may take on a different meaning.

Table 13 shows correlations of individual power scores with dogmatism scores and the ratings. Several relatively substantial correlations appear, and it may be that for the sample as a whole, individual perception of the amount of power held by teachers was somehow related to rating received from a principal. Since the correlations for the group of high dogmatism scorers are not significantly different from the correlations for the low scorers, there is no statistical evidence here that perception of teacher power operates in different ways in these two groups. That power scores may be related to dogmatism scores is, however, indicated by the fact that there was a significant difference between the mean power scores of high dogmatism scorers and low dogmatism scorers (Table 14).

TABLE 13

CORRELATIONS BETWEEN INDIVIDUAL POWER
SCORES AND OTHER SELECTED SCORES

Power Scores	N	Dogmatism Scores	Principals' Ratings	Peers' Ratings
Total Sample	670	.063	.102*	.065
High Dogmatism Scorers ($x > 167$)	110	.206*	.106	.229*
Low Dogmatism Scorers ($x < 116$)	103	.014	.275**	.126

* $p < .05$
** $p < .01$

Another interesting finding about individual perception of power was that the mean power score for principals was significantly different from the mean power score for all teachers. The mean for principals was 9.64, S.D.=2.56;

for teachers, 8.48, S.D.=2.89 ($t = 2.23$, 712 df, $p < .05$).

TABLE 14

COMPARISON OF POWER SCORES FOR HIGH AND LOW DOGMATISM SCORERS

	High Dogmatism Scorers ($x > 167$)	Low Dogmatism Scorers ($x < 116$)
N	110	103
Mean Power Score	8.77	8.00
Standard Deviation	2.78	3.17
	$t = 1.98$, 211 df, $p < .05$	

Teachers' Descriptions of Principals

While it might have been anticipated that teachers in a test situation would probably describe the concept PRINCIPALS on the Semantic Differential in favorable terms, the results of the analysis seem nevertheless quite striking. Table 15 gives the mean scores on all Semantic Differential scales, as these were used by the total sample of teachers to describe principals. According to this data, principals are indeed perceived in quite conventionally favorable terms by teachers. Principals are described as reliable, reasonable, correct, valuable, etc. Further-

TABLE 15

MEANS AND STANDARD DEVIATIONS FOR SCORES ON THE SEMANTIC DIFFERENTIAL SCALES ON THE CONCEPT "PRINCIPALS AS A SOURCE OF INFORMATION" (N=670)

Scale	M	S.D.
(Scale score 1 ⟶ Scale score 7)		
1. Believable -- Unbelievable	1.86	1.19
2. Unreliable -- Reliable	6.03	1.48
3. Stubborn -- Reasonable	5.75	1.55
4. Correct -- Incorrect	2.18	1.24
5. Unimportant -- Valuable	6.09	1.27
6. Exciting -- Dull	3.14	1.41
7. Safe -- Dangerous	2.09	1.27
8. Complex -- Simple	3.74	1.69
9. Wrong -- Right	5.62	1.24
10. Strong -- Helpless	2.40	1.36
11. Devoted -- Unconcerned	2.02	1.24
12. Unpredictable -- Predictable	5.42	1.54
13. Wise -- Foolish	2.27	1.19
14. Impulsive -- Restrained	5.07	1.58
15. Accurate -- Inaccurate	2.20	1.16

more, a cursory analysis of the correlations among the 15 scales on this concept revealed extremely high agreement among teachers as to how the scales related to one another (e.g., which was the "good" end, which was the "bad" end).

Information on Professional Background

Some of the data gathered on age and job experience is presented in Table 16. No thorough analysis of this data has yet been undertaken, but it is interesting to note the relatively high positive correlations between dogmatism scores and age and between dogmatism scores and years of experience in teaching.

SECTION 1

TABLE 16

SUMMARY OF PROFESSIONAL BACKGROUND INFORMATION

School	Mean Age	S.D.	Mean Years Experience in Teaching	S.D.	Mean Years in Present School	S.D.	Dogmatism Score and Age	Dogmati Score a Years Experien Teachin
AA	30.38	7.76	4.07	3.77	2.00	1.57	-.170	-.125
AB	37.85	12.66	13.69	10.39	5.21	3.62	-.148	.223
BA	35.90	7.00	10.81	4.23	3.91	2.97	.072	-.016
BB	41.15	15.02	11.69	10.05	5.38	5.64	-.113	-.317
DA	38.12	7.93	9.06	5.57	4.75	3.15	-.105	-.263
DB	38.33	14.95	13.76	7.94	5.44	4.02	.068	-.200
DC	37.66	10.32	9.93	5.03	6.47	3.63	-.023	-.385
DD	40.00	10.43	13.44	8.03	5.28	3.60	.240	.328
DE	45.00	10.69	14.66	6.24	6.20	3.95	.191	.305
DF	38.88	11.95	11.27	6.09	5.28	3.51	.373	.178
DG	42.77	11.14	12.94	7.21	3.94	2.66	.025	.298
DH	38.83	11.44	14.61	8.33	6.89	3.23	.022	.437
DI	40.33	15.97	15.73	7.87	5.87	3.42	-.184	.128
DJ	38.33	8.66	6.88	7.02	2.78	1.87	.074	-.270
DK	38.84	11.92	15.07	6.14	5.92	2.28	.489	.366
DL	35.90	11.36	13.27	7.32	8.55	5.89	.097	-.079
LA	38.33	11.12	9.66	6.90	2.60	1.96	.424	.219
MA	29.28	6.46	5.50	3.50	3.64	1.99	-.036	-.061
MB	32.77	7.32	7.05	5.27	3.72	3.02	.362	.029
MC	26.53	3.75	4.61	4.42	2.77	2.29	.101	.020
MD	32.64	8.31	7.23	5.15	4.76	3.56	.229	.114
NA	35.50	9.10	8.30	9.31	3.65	2.59	.471	.427
NB	32.77	11.65	5.61	4.90	2.83	1.43	.191	.568
NC	37.60	13.21	10.73	10.66	6.04	5.28	.250	.374
ND	33.80	8.81	8.36	5.36	4.64	2.70	.168	.241
OA	33.00	10.05	7.65	7.11	2.50	1.32	-.480	-.350
OB	41.66	10.73	14.41	10.57	4.08	3.28	.128	.123
PA	42.00	12.51	12.20	8.49	5.00	3.77	.154	.034
PB	45.50	12.88	13.41	10.06	3.83	4.06	.197	.286
PC	36.33	14.57	14.53	11.38	7.13	6.55	.348	.371

SECTION 2

TABLE 16

SUMMARY OF PROFESSIONAL BACKGROUND INFORMATION

Mean Years in Present School	S.D.	Correlation: Dogmatism Score and Age	Correlation: Dogmatism Score and Years Experience Teaching	Correlation: Age and Principal's Rating	Correlation: Age and Peer Rating	Correlation: Years Experience Teaching and Principal's Rating	Correlation: Years Experience Teaching and Peer Rating
2.00	1.57	-.170	-.125	-.077	-.232	-.096	-.132
5.21	3.62	-.148	.223	-.050	.103	-.146	-.782
3.91	2.97	.072	-.016	-.316	-.089	-.288	-.504
5.38	5.64	-.113	-.317	.100	-.445	.110	-.241
4.75	3.15	-.105	-.263	.089	.154	-.110	.095
5.44	4.02	.068	-.200	-.073	.154	-.143	.093
6.47	3.63	-.023	-.385	-.285	-.189	-.330	-.345
5.28	3.60	.240	.328	-.166	-.082	-.173	-.129
6.20	3.95	.191	.305	-.268	.021	.210	.148
5.28	3.51	.373	.178	-.142	.209	-.071	.142
3.94	2.66	.025	.298	-.110	-.623	-.014	-.503
6.89	3.23	.022	.437	-.091	-.866	-.108	.105
5.87	3.42	-.184	.128	.272	-.022	.407	.152
2.78	1.87	.074	-.270	.307	.007	.321	.037
5.92	2.28	.489	.366	-.336	.291	-.286	.213
8.55	5.89	.097	-.079	.387	.355	-.109	-.037
2.60	1.96	.424	.219	.124	-.070	-.008	-.102
3.64	1.99	-.036	-.061	.434	.668	.509	.323
3.72	3.02	.362	.029	.325	.326	.222	.213
2.77	2.29	.101	.020	-.207	-.426	-.009	-.441
4.76	3.56	.229	.114	.124	.109	.033	-.047
3.65	2.59	.471	.427	-.259	-.325	-.311	-.509
2.83	1.43	.191	.568	.156	.026	-.473	-.268
6.04	5.28	.250	.374	.084	.030	.276	-.035
4.64	2.70	.168	.241	-.237	-.207	-.539	-.405
2.50	1.32	-.480	-.350	-.118	.148	-.059	.263
4.08	3.28	.128	.123	- 0	-.186	-.470	-.343
5.00	3.77	.154	.034	-.091	.024	.172	.300
3.83	4.06	.197	.286	.098	-.546	-.119	-.640
7.13	6.55	.348	.371	-.535	-.643	-.249	-.427

SECTION 1

TABLE 16 (continued)

School	Mean Age	S.D.	Mean Years Experience in Teaching	S.D.	Mean Years in Present School	S.D.	Dogmatism Score and Age	Dogmatis Score an Years Experienc Teaching
PD	37.50	14.84	13.50	10.80	4.58	4.01	.157	.384
PE	37.00	13.73	10.40	8.59	5.53	4.21	.251	.081
PF	37.40	13.92	11.95	9.86	5.84	5.96	.238	.316
RA	30.45	6.87	5.90	4.48	2.55	2.18	.503	.300
SA	36.33	9.15	7.00	6.11	1.00	0	.681	.304
SB	36.76	12.36	7.52	8.00	1.29	.583	.407	-.099
SC	33.42	8.98	6.42	5.79	.84	.93	.017	.207
SD	36.66	14.24	8.77	8.71	1.44	.51	-.169	.271
SE	34.16	9.00	5.25	4.55	2.83	2.00	.023	.060
SF	36.36	11.66	8.28	8.37	1.09	.67	.287	.401
SG	39.00	8.55	9.13	7.06	2.47	1.33	.128	.082
SH	38.52	11.14	14.06	12.06	1.82	.87	.432	.369
SI	32.61	9.95	6.00	3.80	2.67	1.30	.019	-.024
XA	41.42	10.08	11.28	7.98	4.93	5.19	.098	.031
						Median =	.155	.153

SECTION 2

TABLE 16 (continued)

Mean Years in Present School	S.D.	Correlation Dogmatism Score and Age	Dogmatism Score and Years Experience Teaching	Age and Principal's Rating	Age and Peer Rating	Years Experience Teaching and Principal's Rating	Years Experience Teaching and Peer Rating
4.58	4.01	.157	.384	-.085	-.254	-.325	-.524
5.53	4.21	.251	.081	.166	-.035	-.119	-.597
5.84	5.96	.238	.316	.198	.314	.277	.522
2.55	2.18	.503	.300	.264	.148	.086	-.194
1.00	0	.681	.304	-.530	-.394	-.310	-.262
1.29	.583	.407	-.099	-.021	-.437	-.320	.680
.84	.93	.017	.207	.198	.164	.130	.043
1.44	.51	-.169	.271	.105	.215	.000	-.057
2.83	2.00	.023	.060	-.004	.115	.060	.600
1.09	.67	.287	.401	-.078	.084	.154	.235
2.47	1.33	.128	.082	.128	-.060	-.073	-.052
1.82	.87	.432	.369	-.770	.215	-.696	-.257
2.67	1.30	.019	-.024	.345	.027	.292	.062
4.93	5.19	.098	.031	.129	-.107	.049	.178
	Median =	.155	.153	.021	-.004	-.084	-.050

CHAPTER V

DISCUSSION

The outstanding feature of the findings is their general failure to support the predictions of this study. By and large, the results indicated no relationships among variables across the entire sample.

Two major possibilities are immediately apparent to account for these results. First, there is the possibility that the instruments used did not adequately measure the constructs involved in the hypotheses. As far as the use of instruments was concerned, this was an exploratory investigation. No concentrated effort was made to refine various instruments so that they would meet stringent criterion requirements for these hypotheses and for this sample. It is possible that more carefully devised instruments would have brought different results. For example, the Dogmatism Scale was accepted as a general measure of authoritarianism. More attention to those items on the scale which presumably deal with specific attitudes toward authority might have uncovered other relationships among variables. Problems with the scoring of the Semantic Differential data seem particularly clear, and it is in this context that Hypotheses 3 and 4 will be discussed.

The second possible explanation is that the hypotheses are indeed empirically indefensible. It is important to note, however, that the findings of no relationships across schools could have come about in two ways (aside from measurement failure). There could either be no real relationships among the variables, or, relationships could occur in opposite directions from some zero point, depending upon school conditions. The range of correlation coefficients obtained for the social behaviors investigated suggests the latter possibility, and the first two hypotheses will be discussed primarily in this light.

Hypothesis 1

The case for the existence of truly opposite kinds of relationships is somewhat supported by the findings from the impressionistic accounts of schools. It is admittedly difficult to interpret exactly the difference between a school staff which is "happy, feels secure, shows mutual trust" and a school staff which is "troubled, feels insecure, shows lack of trust," but these descriptions do seem to be tapping factors which are associated with the way in which a principal responds to teachers with high dogmatism scores. At this point it is possible only to speculate about what these factors might be and how they might operate, but such speculation could provide clues for further research.

A "happy" school may be one in which the entire staff is a cohesive, working group--a group which includes the principal. Under such conditions two things may happen which are relevant to the question here. The principal may know his teachers better, be more aware of their behavior in different situations; and this may lead to his seeing the high dogmatism scorers more nearly as they "really" are, unmasked by their careful behavior vis-a-vis an authority figure. At the same time, the more the principal becomes just one of the gang, the more the formal superordinate-subordinate relationship is dimmed. Perhaps the threat inherent in higher organizational status is thereby reduced for the high dogmatism scorers, and they are less constrained to be always on their best submissive behavior with the principal.

The "troubled" schools may represent the other side of the coin, so far as social distance between organizational statuses is concerned. The formal distinction between superordinate and subordinate may be carefully maintained, in lieu of the development of an all-inclusive, cohesive group of co-workers. Under these conditions a principal may know only the subordinate-type behavior of his teachers. Concurrently, the clear distinction between statuses tends to insure that the highly dogmatic teachers see and react to the principal as an authority figure.

These guesses about the social structure of "happy" and "troubled" schools seem to be supported to some degree by the positive relationship found between "happy" ratings and greater mean power scores of teachers. In "happy" schools teachers tend to see themselves as having more control as a group, perhaps as less under the thumb of the organizationally constituted authority figure.

One could phrase these descriptions of "troubled" and "happy" schools in terms of the relative importance of the external and internal systems, as these are conceived by Homans.[1] As long as daily interaction in an elementary school staff is ordered primarily according to external system requirements, conditions are conducive to a positive relationship between dogmatism in teachers and high ratings by principals. When internal system demands dominate interaction, these conditions deteriorate, and the resulting conditions favor a negative relationship between the variables. In this more general form the interpretation does seem to offer a framework that will also account for two discrepant findings on superordinates' ratings of authoritarian subordinates which were reported in Chapter II.

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[1] Homans, op. cit. The external and internal systems are said to exist simultaneously in a group. The external system represents the patterns of behavior by which the group adjusts to the demands of its environment; the internal system represents those elaborations of behavior which are not required by the environment but which originally grow out of it, then react upon it.

Thus, combat groups may be seen as groups in which internal system demands predominate, and negative relationships between authoritarianism scores and superordinates' ratings would be expected;[2] while military training units would appear to be groups in which the external system directs most interaction, so positive relationships would be predicted.[3]

The finding for Prediction 1(a), that higher dogmatism scores in principals were associated with lower ratings given to teachers who had high dogmatism scores, runs counter to the prediction and is unexplainable by the original theory. Nor does the "happy-troubled" school concept offer more than a partial interpretation of this negative finding. The prediction that dogmatic principals would rate dogmatic teachers more highly was based on the supposedly greater value placed by dogmatic superordinates upon submissive responses from subordinates. Following the same reasoning, if the "happy" school is indeed one in which the principal has the opportunity to see more overbearing behavior in dogmatic teachers, then the dogmatic principal might be expected to respond quite unfavorably to such behavior.[4] Thus, the unexpected negative correlations associated with dogmatic principals might be largely explained as a consequence of the "happy" school structure. But there is nothing in this interpretation which suggests that dogmatic principals will be predominately associated with "happy" schools in the first place, and nondogmatic principals with "troubled" schools. Yet in this sample there seems to be some association of dogmatic principals with "happy" schools and nondogmatic principals with "troubled" schools, if one accepts the notion that greater negative correlations between teacher dogmatism and principal's ratings tend to occur in "happy" schools and greater positive correlations in "troubled" schools.

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[2] Rohde, op. cit.

[3] Christie, Changes in authoritarianism as related to situational factors; Williams and Leavitt, op. cit.

Because the "happy-troubled" dimension seems to make theoretical sense and the reverse effect of principal's dogmatism does not, the suggestion is offered that the apparent effect of principal's dogmatism may be only an accident of this sample. That is, in this particular group of schools, more dogmatic principals happened to be found in "happy" schools, more nondogmatic principals in "troubled" schools. Strictly speaking, however, the reversal of the prediction must remain an unexplained finding.

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[4] One might even argue that in some cases the intolerant, dogmatic principal might respond even more unfavorably than the nondogmatic principal to overbearing behavior in subordinates, but this introduces other questions about agreement and disagreement between two dogmatic persons, which are beyond the scope of this study.

The failure of the findings to support Prediction 1(b), that decrease in the amount of decision-making power held by teachers as a group would be associated with decrease in the size of the positive correlation between teachers' dogmatism scores and principals' ratings, seems fairly complete. Only one bit of evidence tends to substantiate the reasoning behind the prediction. In five of the six schools in which significant correlations were found, the mean teacher power scores were above the median of the sample. This seems to give some support to the general idea that relative autonomy of the group tends to allow individual differences in behavior to flourish to the point where they can be discriminated by a principal.

It is possible that the relevant variable is not simply the amount of decision-making power held by teachers, but the amount of that power relative to the amount held by the principal.[5] This study did not take into account the possibility that the principal's power, as well as the teachers' power, might vary in different schools. Perhaps, then, the main construct in the hypothesis was not adequately measured by the power score which was used.

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[5] Various models of relative power as well as total power within organizations have been presented as "control graphs" by Tannenbaum. (Arnold Tannenbaum, Control structure and union functions, Amer. J. Sociol., 1956, 61, 536-545.)

While there was no support whatever in the analysis for the specific statement of Prediction 1(c) concerning the relative strength of the teacher dogmatism-principal's rating correlation, the findings which suggest the "happy" and "troubled" schools also suggest that the four hypothetical school environments may have been on the right path but were far too simple a model for a very complex reality. If the crucial dimensions of "happy" schools and "troubled" schools could be determined and plugged into the model, some joint effects of principal's dogmatism and teachers' power might appear in this richer context. A framework such as that developed by Halpin and Croft,[6] in which organizational climate is described in terms of a number of characteristics of the work relationships between principal and teachers, might be a good starting point for further investigation.

As the results stand, however, there is no evidence that different teacher power mean scores have any more effect when combined with different dogmatism scores of principals than they did alone. Also, principal's dogmatism, which had appeared to be inversely related to school correlations (see Results: 1(a)), now seems to have no effect when correlations are obtained across schools for each of the four environments (Table 7). This is taken as further support for the suggestion offered above that the association of high dogmatism scores in principals and negative correlations in separate schools is an artifact of the distribution of principals in "happy" schools in this sample.

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[6] Andrew W. Halpin and Don B. Croft, The organizational climate of schools (Chicago: Midwest Administrative Center, the University of Chicago, 1963), pp. 33-34.

Hypothesis 2

In a way the findings here were the most surprising result of the study. Previous investigations have not been in clear agreement as to relationships between authoritarianism and sociometric choice by superordinates, but the accumulated evidence on authoritarianism and peer choices has rather consistently reported a sizeable negative relationship between these two variables.[7] The range of correlations found in schools in this sample, between dogmatism scores and peer ratings suggests, however, that the relationship between authoritarianism and peer choices may be contingent upon a complex of school situational factors, just as appeared to be the case for the relationship between authoritarianism and principals' ratings.

The plausibility of this notion is enhanced by the finding here, too, of a significant association between the dogmatism score-peer rating correlations and the "happy-troubled" ranks of schools. The association is in the same direction as that found with principals' ratings. This is not surprising in light of the fact that an overall high correlation was found in this sample between principals' ratings and peer ratings. But the question is whether or not the interpretation based on the "happy-troubled" schools syndromes can explain the finding. As for predicted negative correlations between dogmatism scores and peer ratings being found in "happy" schools, the same general reasoning which was suggested for principals' ratings seems also to hold for peer ratings. That is, in the "happy" schools the dogmatic teacher is apt to be more thoroughly known by his co-workers because he has fewer screens to hide behind. His intolerance will out, and he will be seen as an undesirable co-worker.

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[7] Slater, op. cit.

The interpretation does not explain, however, the unexpected positive correlations between dogmatism scores and peer ratings in "troubled" schools. These schools are presumably the ones in which formal status distinctions prevail, and this is the very condition on which the original predictions of the different relationships of dogmatism with principals' ratings and with peers' ratings were based. With clear status distinctions, the dogmatic personality supposedly modifies his behavior toward superordinates, but continues his overbearing behavior with peers.

The findings of positive correlations, then, between dogmatism scores and peer ratings cannot be reconciled with the original prediction simply by means of the "happy-troubled" school dimension. But rather than reject the validity of the concept of a wide range of correlations on the basis of the failure of a single explanatory scheme, it would seem advisable to look first for other explanations. For example, some evidence was cited earlier which supports the idea that the relationship of authoritarianism to peer choices will vary with such group characteristics as status consensus and degree of role specialization.[8]

It also seems possible to offer a partial explanation of the finding in terms of individual perception of power. High dogmatism scorers tended to see teacher groups as more powerful than did low dogmatism scorers (Table 14). Looking at Table 13 only for its heuristic value, perception of power is suggested as a possible link between high dogmatism and high peer ratings. While there is no real evidence here of such a connection, the idea fits some findings in previous studies. It was noted earlier in this report that the overbearing behavior of the dogmatic personality toward peers might be expected to change if he perceived the group as a powerful one in which he must seek approval.[9] Perhaps this is what occurs in some schools where there is a positive correlation between dogmatism scores and peer ratings.

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[8] Halpin and Croft, op. cit.

Hypotheses 3 and 4

The findings for the predictions concerning cognitive behavior toward authority seem to indicate fairly clearly a probable failure in measurement. Two aspects of the technique used stand out as possible major causes of this failure: the use of the criterion scale "correct-incorrect" and the choice of concepts.

The assessment of similarities and differences in descriptions given on the Semantic Differential by summing scale-point differences does seem to be an intuitively understandable index. It avoids some of the difficulties in interpretation which beset factor analysis and the D-measure.[10] For this reason it was chosen over the other two more commonly used techniques. But the use of this measure in the context of this study required that some prior definition be made of two kinds of concepts, namely, positive and negative authorities. Preliminary thinking, along with analysis of the pretest material, led to the decision to use the correct-incorrect scale as the criterion. It was felt that this scale came closest to fitting Rokeach's definitions of positive and negative authorities as correct and incorrect sources of information.

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[9] Osgood, Suci and Tannenbaum, op. cit.

[10] This finding is consistent with Mogar's report of more extreme responses on Semantic Differential scales being associated with higher authoritarianism scores. (Mogar, op. cit.)

As it turned out, subjects used the incorrect half of this scale very little. Negative authorities available for analysis were consequently few in number for the individual subject,(and it must be remembered that the analyses hinged on comparisons among concepts for each individual). It seems possible that the findings on positive-negative difference scores and negative coherence scores could have been distorted by the very small sample sizes of the comparisons involving negative authorities. The finding of a significantly more extreme scoring pattern for the high dogmatism scorers, for example, hints that the hypothesized behaviors regarding positive-negative differences are potentially there. Perhaps another scale would have produced more variation in scores and still have met adequately the theoretical definitions of positive and negative authorities. Or, a combination of scales might be the best approach to the problem.

The other major possibility which must be considered is that most of the concepts used were in truth seen positively by most of the subjects. An attempt was made to include examples of present and absent, personal and impersonal, high and low status, as well as potentially positive and negative sources of information, but all these examples were confined to the general school setting. One can speculate that most teachers will, if faced with having to commit themselves on paper, declare trust in the sources from which they rather routinely receive information in their professional capacities. But it is also possible that most teachers do indeed believe in these sources. Perhaps it is part of the often-noted oversensitivity of educators about their professional standing.

Further analysis of the descriptions of specific concepts used on the Semantic Differential might uncover more evidence on this point, but the great agreement in the subjects' descriptions of PRINCIPALS, along with the similarity of the positive coherence scores for all groups suggests that more controversial sources of information should be used as concepts in order to test the predictions adequately.[11] The hypothesized differences in cognitive behaviors toward authorities do not rule out all possibility of agreement between dogmatic and nondogmatic persons on descriptions of some authorities. It may be that the authorities used as concepts on this Semantic Differential tapped a large area of agreement, an area, perhaps, in which professional pride (or insecurity) overrides personality differences.

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[11] The idea that greater differences between dogmatic and nondogmatic subjects would be greater for controversial concepts is in line with Mogar's finding the more extreme Semantic Differential responses of authoritarian subjects were most pronounced for controversial concepts (Ibid.). Also, a preliminary inspection of the data here on individual concepts seems to show that the concept which was most often marked negative was TEACHERS' UNIONS. Most people would probably agree that this is a controversial concept among teachers today. And it is interesting to note that unions are frequently described by teachers as somehow "unprofessional."

CHAPTER VI

CONCLUSIONS

This study was dedicated to the idea that adequate explanations of interactions among teachers and principals must encompass a wide range of personality and situational variables. If it has shown nothing else, it testifies to the validity of that idea. The outstanding findings on the social behavior investigated neither supported nor clearly rejected the hypotheses, but rather indicated 1) that a variety of relationships existed among the variables, and 2) that the conceptual scheme which employed only a few personality and situational dimensions was not adequate to explain this range.

The evidence of the range of relationships between dogmatism scores and the ratings may be the most important finding.[1] The investigation of authoritarianism, as it was reviewed in Chapter II, has been marked by a disproportionate amount of work in laboratory settings and/or with captive-audience subjects, and by a lack of attention to natural behavioral manifestations which are implied by the theory. Although in this study the investigation of natural behavioral manifestations was indirect (i.e., inferred from ratings), the results suggest that statements about the behavior of the dogmatic, or authoritarian, personality and the reactions of others to that behavior should be more carefully qualified by situational conditions than is usually the case.

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[1] This is an obvious illustration of an advantage of a relatively large sample. There are many combinations of 4-5 schools within this sample, which, if taken alone, would have indicated clearly positive, clearly negative, or clearly zero relationships.

This is not to say that the concept of the dogmatic personality does not allow for the interplay of personality and situational determinants. The main hypotheses of this study were premised on the idea that the dogmatic personality will indeed behave differently in two different situations, that is, with persons of higher and of equal status. But this simple formulation of the interaction between personality and status did not alone seem to have predictive value for behavior across different school settings. In order to account just for the findings of this study it was necessary to bring in the idea of the "happy" and "troubled" schools, and later to add the concept of dogmatic submission to a powerful peer group. In sum, the results of this study point to the need for further specification of the conditions under which a particular kind of relationship between dogmatic personality and responses of others will occur.

Only with such knowledge would it be possible to answer the question posed at the beginning of this investigation: is the representativeness of the behavior sample available to the rater of dogmatic teachers a function of the organizational status of the rater? Whether or not the "happy-troubled" school interpretation of the relationship between dogmatism scores and principals' ratings is adequate is of course open to further evidence. If it is on the right track, it would go part of the way toward clarifying some of the things we need to know in addition to the status of the rater. It suggests that to predict authoritarian submission to a principal we must know whether or not formal status distinctions really count in the school. It also suggests that in order to predict what behaviors the principal will take into account in his ratings of teachers, we must know the range of behavior which is visible to him.[2]

Perhaps the two variables--principal's dogmatism and teachers' decision-making power--which in this study were assumed to modify the teachers' dogmatism-principals' ratings relationship are too far down the line in the association of relevant variables for their effects to show up clearly without some control or understanding of prior conditions. In other words, effects of principal's dogmatism or teachers' power may become meaningful only within some pre-established context like "happy" or "troubled" school.

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[2] The notion of visible range of behavior may at first sound like the educators' maxim that principals should get around and observe their teachers. But considering also the effects of the presence or absence of emphasis on formal status, the matter does not seem all that simple. When formal status distinctions are paramount, frequent visits to classrooms may not net the principal anything but more of the same kind of careful behavior from dogmatic teachers. On the other hand, the breakdown of status lines may not imply that principals must see a wide range of behavior.

The only conclusion drawn about the investigation of cognitive behavior toward authority in the open mind and in the closed mind is that deficiencies in measurement probably prevented a fair test of the hypotheses. Only a scrap of evidence was added for the assumption that closed minds see authorities in more absolute terms. Much in need of further investigation is the whole relationship between behavior toward authority figures in the social environment and cognitive behavior toward authorities as sources of information.

CHAPTER VII

SUMMARY

Drawing on Rokeach's conceptualization of the dogmatic personality, this study investigated two social behaviors and, secondarily, two cognitive behaviors which are implied by that theory. The subjects were 44 principals and 715 teachers in 44 elementary schools.

The major hypotheses were 1) that highly dogmatic persons tend to behave in an overly submissive manner toward authority figures, and 2) that they tend to behave in an overbearing manner toward peers. Such a situation might result in having different kinds of samples of behavior available to principals and to teachers. This might lead to different ratings given by principals and by peers to highly dogmatic teachers.

Prediction 1 was that dogmatism scores of teachers would be positively correlated with ratings on congeniality given by principals. Results showed that across the 44 schools there was a rather wide range of negative, zero, and positive correlations. These relationships, in turn, were found to correlate highly with impressionistic accounts of general school atmosphere, which had been obtained for 26 of the schools. The correlation showed an association of negative teacher dogmatism-principal rating relationships with schools which had been described as relatively "happy," and an association of positive relationships with schools that had been described as relatively "troubled." The tentative interpretation offered was that 1) in "troubled" schools formal status distinctions predominated over cohesive, total group relationships, so that dogmatic teachers behaved in a submissive manner toward principals; 2) in "happy" schools the principal was seen as part of the total working group and status lines were blurred, so that dogmatic teachers were less apt to feel threatened by an authority figure and less apt to control overbearing behavior in his presence. There was, however, no way to test this interpretation with data from this study.

It was also predicted that higher dogmatism in principals would tend to increase the positive correlation between teachers' dogmatism and principal's rating, and that decrease in the decision-making power of teachers as a group in the school would tend to lower the correlation. No effect of the amount of teachers' power was discovered. An effect of principal's dogmatism, opposite to the direction predicted, appeared, and no explanation could be offered for this reverse effect, although it was suggested that if the "happy-troubled" schools interpretation were valid, then the apparent reverse effect of principal's dogmatism might have come about because in this particular sample there were more dogmatic than nondogmatic principals in "happy" schools.

Prediction 2 was that there would be a negative relationship between teachers' dogmatism scores and the ratings they received from their peers. Again, it was found that the correlation was not significantly different from zero across the whole sample, but that a range of correlations, from negative to positive, appeared when schools were considered as the units of analysis. And again, these school correlations were significantly associated with the "happy-troubled" school descriptions in the same direction as the teacher dogmatism-principal rating correlations. In this case, however, the "happy-troubled" schools interpretation was not found adequate to explain the range of correlations. Specifically, while the expected negative correlations seemed to follow from the description of "happy" schools, the unexpected positive correlations could not be explained simply in the context of the idea of "troubled" schools. Several different possible factors were suggested to account for these positive correlations.

The hypotheses regarding the cognitive behavior investigated were 1) that dogmatic persons will make a sharper distinction than will nondogmatic persons between what Rokeach has called positive and negative authorities, i.e., sources of information in which one believes and sources in which one does not believe; and 2) that dogmatic persons perceive authorities in more absolute terms than do nondogmatic persons.

Prediction 3 was that high dogmatism scores would be associated with greater differences in descriptions between positive and negative authorities. This prediction was not borne out by the findings. The high and low groups showed no significant mean difference between descriptions of positive and negative authorities. The high dogmatism scorers, however, did reveal a significant tendency to mark more extreme scale points in their descriptions. A second part of Prediction 3 was that teachers with high dogmatism scores would be less apt than teachers with low scores to perceive principals as negative authorities. No difference was shown by the findings. Instead, almost all teachers described principals as positive authorities. Nor was Prediction 4, that higher dogmatism scores would be associated with greater tendency to describe all positive authorities alike and all negative authorities alike, confirmed.

It was felt that inadequacies in measurement techniques had distorted results on the Semantic Differential data, and this possibility was discussed.

The general conclusion was that the findings indicated a need for greater specification of social conditions which lead to different behaviors in dogmatic persons and different reactions of others to that behavior. Some implications for ratings by principals of elementary teachers were also discussed.

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APPENDICES

APPENDIX I

Schools grouped by district	Number of elementary schools in district	Number of pupils	Number of teachers	Median family income	Median school years completed by adults 25 years and over
District A	84				
AA		472	15	$22,706	14.2
AB		510	16	20,392	14.4
District B	13				
BA		299	12	7,517	12.6
BB		371	11	6,125	12.2
District D	19				
DA		558	16	9,580	12.5
DB		638	19	7,500	11.3
DC		511	16	9,828	12.4
DD		678	20	7,760	12.1
DE		486	14	8,895	12.3
DF		675	20	5,849	12.0
DG		738	21	9,790	12.5
DH		586	17	7,622	12.1
DI		603	19	7,622	12.1
DJ		524	15	8,898	12.4
DK		474	14	7,158	11.6
DL		564	16	8,192	12.3
District L	5				
LA		486	16	11,850	13.4
District M	10				
MA		384	15	6,367	10.5
MB		592	21	8,635	12.9

Schools grouped by district	Number of elementary schools in district	Number of pupils	Number of teachers	Median family income	Median school years completed by adults 25 years and over
District M (continued)					
MC		566	21	$ 8,069	12.6
MD		496	22	6,942	11.4
District N	18				
NA		796	23	6,249	9.9
NB		574	16	7,355	12.0
NC		973	28	7,241	11.2
ND		719	26	7,241	11.2
District O	11				
OA		762	22	-*	-*
OB		423	15	-	-
District P	10				
PA		304	8	7,268	12.2
PB		538	19	6,602	11.2
PC		612	18	6,206	10.0
PD		449	12	5,805	9.7
PE		739	20	7,500	12.1
PF		841	24	6,309	10.5
District R	16				
RA		440	13	6,582	11.3
District S	9				
SA		782	21	-*	-*
SB		1025	28	-	-
SC		798	19	-	-

Schools grouped by district	Number of elementary schools in district	Number of pupils	Number of teachers	Median family income	Median school years completed by adults 25 years and over
District S (continued)					
SD		1011	26	$ -	-
SE		472	14	-	-
SF		804	23	-	-
SG		944	29	-	-
SH		565	17	-	-
SI		891	30	-	-
Private					
XA		70	18	11,000	14.0

* Information not available.

Source: U.S. Bureau of the Census, U.S. Census of Population and Housing, 1960 Census Tracts, Los Angeles County, Orange County, Santa Barbara County.

APPENDIX II

DOGMATISM SCALE, FORM E

ATTITUDE SURVEY

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with some of the statements, and perhaps uncertain about others. Whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Directions

Mark each statement according to how much you agree, or disagree with it. Please mark every one. Circle +3, +2, +1, or -1, -2, -3, depending on how you feel in each case.

+3	I AGREE VERY MUCH	-1	I DISAGREE A LITTLE
+2	I AGREE ON THE WHOLE	-2	I DISAGREE ON THE WHOLE
+1	I AGREE A LITTLE	-3	I DISAGREE VERY MUCH

Read each statement and mark it according to your first reaction.

1. A person who thinks primarily of his own happiness is beneath contempt.

-3 -2 -1 +1 +2 +3
(Scale repeated for each item.)

2. The main thing in life is for a person to do something important.

3. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

4. Most people just don't know what's good for them.

5. In times like these, a person must be pretty selfish if he considers his own happiness primarily.

6. A man who does not believe in some great cause has not really lived.

7. I'd like it if I should find someone who would tell me how to solve my personal problems.

8. Of all the different philosophies which have existed in this world, there is probably only one which is correct.

9. It is when a person devotes himself to an ideal or cause that his life becomes meaningful.

10. In this complicated world of ours the only way we can know what is going on is to rely upon leaders or experts who can be trusted.

11. There are a number of persons I have come to hate because of the things they stand for.

12. There is so much to be done and so little time to do it in.

13. It is better to be a dead hero than a live coward.

14. A group which tolerates too much difference of opinion among its own members cannot exist for long.

15. It is only natural that a person should have a much better acquaintance with ideas he believes in than with ideas he opposes.

16. While I don't like to admit this even to myself, I sometimes have the ambition to become a great man, like Einstein, or Beethoven, or Shakespeare.

17. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary at times to restrict the freedom of certain political groups.

18. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

19. Most people just don't give a "damn" about others.

20. A person who gets enthusiastic about a number of causes is likely to be a "wishy-washy" sort of person.

21. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

22. If given the chance I would do something that would be of great benefit to the world.

23. In times like these it is often necessary to be more on guard against ideas put out by certain people or groups in one's own camp than by those in the opposing camp.

24. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

25. Once I get wound up in a heated discussion I just can't stop.

26. There are two kinds of people in this world: those who are on the side of truth and those who are against it.

27. Man on his own is a helpless and miserable creature.

28. The United States and Russia have just about nothing in common.

29. In the history of mankind there have probably been just a handful of really great thinkers.

30. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

31. The present is all too often full of unhappiness. It is the future that counts.

32. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what is going on.

33. Fundamentally, the world we live in is a pretty lonely place.

34. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

35. The worst crime a person can commit is to attack publicly the people who believe in the same thing he does.

36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

37. Most of the ideas which get published nowadays aren't worth the paper they are printed on.

38. It is only natural for a person to be rather fearful of the future.

39. My blood boils whenever a person stubbornly refuses to admit he's wrong.

40. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

APPENDIX III

The general design of the study required that some index be obtained of the perception of the various school staffs concerning the amount of power they possessed as teachers over the decisions which were made in the school. Based upon discussions with a number of elementary school teachers and principals, a preliminary form of a power scale was constructed. The preliminary form consisted of 15 items. The preliminary form was administered to 30 elementary school teachers teaching at the University Elementary School, UCLA. The subjects were asked to describe several schools in responding to the instrument. The responses of the pre-test group along with interviews with some of the respondents were used to decide upon the final 14-item form of the School Description Scale which is reproduced on the following page.

SCHOOL DESCRIPTION SCALE

The responsibilities that teachers have, outside of teaching in the classroom, vary from school to school. Sometimes these responsibilities are small in number, sometimes they are large in number. Below is a list of some of the things about which teachers may help to make decisions. Please check those items that you believe apply generally to the teachers in your school. You may check all, some, or none of the items, whatever you think best describes your school.

The teachers in this school have a lot of influence in making decisions about:

_____curriculum

_____standards of pupil behavior in their own classrooms

_____standards of pupil behavior in halls and on playground

_____daily schedule in their own classrooms

_____daily schedule in the whole school

_____special discipline problems with pupils

_____special all-school affairs, such as open-house, assemblies, etc.

_____unusual problems that affect the whole school

_____time of staff meetings

_____content of staff meetings

_____arrangements for parent conferences

_____assignments for duties outside of classrooms (yard duty, etc.)

_____planning social gatherings of school staff

_____standards of dress for school staff

APPENDIX IV

A preliminary form of the Semantic Differential consisting of concepts and 39 scales was first constructed. The concepts were selected to range widely over possible authorities, and the scales were selected on the basis of discussion and thinking about the usefulness of various scales for the purposes of this study. The preliminary form of the Semantic Differential was administered to a sample of 30 elementary school teachers. An item analysis was performed on the data obtained on the pretest, and the results of the item analysis, which included a principal components analysis with a normal varimax rotation, was used to assist in the construction of the final form. In addition to the pre-test results, additional thinking and discussion were used to decide on the final form of the Semantic Differential.

The instructions given to subjects and the concepts and scales on the final form are given on the following pages.

Instructions for Semantic Differential

STUDY OF WORD MEANING

The object of this study is to find out how teachers like to describe certain people and things found in most school situations. It would be possible to think about these people and things in several different ways, and you might describe them differently depending on how you were thinking about them. Here you are asked to think about each person or thing as a potential source of information in the school.

On each of the following pages there will be a person or thing named at the top of the page. Under this are many pairs of adjectives. Here is an example:

CUSTODIAN

good__:__:__:__:__:__:__bad

Each pair of adjectives forms a scale. By making a check-mark along the scale you can indicate what you associate with the particular word that is listed above the scales. For example, if you feel that the person or thing named above the scale is very closely associated with one end of the scale, you would place the check-mark as follows:

CUSTODIAN CUSTODIAN

good✓:__:__:__:__:__:__bad OR good__:__:__:__:__:__:✓bad

If you feel that the person or thing is quite closely related to one or the other end of the scale, you would place your check as follows:

CUSTODIAN CUSTODIAN

good__:✓:__:__:__:__:__bad OR good__:__:__:__:__:✓:__bad

If the person or thing seems only slightly related to one side as opposed to the other, you would check as follows:

CUSTODIAN CUSTODIAN

good__:__:✓:__:__:__:__bad OR good__:__:__:__:✓:__:__bad

If you consider both sides equally associated, you would check the middle space on the scale:

CUSTODIAN

good__:__:__:✓:__:__:__bad

Remember: Never put more than one check-mark on any scale. Be sure to check every item. Do not leave the line blank. If you are undecided, check the middle space. Think of each person or thing as a source of information.

Do not spend more than a few seconds marking each scale. Your first impression is what we would like to learn about.

Sample of Semantic Differential Form

PRINCIPALS
as a source of information

believable____:____:____:____:____:____:____unbelievable

unreliable____:____:____:____:____:____:____reliable

stubborn____:____:____:____:____:____:____reasonable

A complete list of the fifteen concepts and fifteen scales used is given below:

Concepts

Principals
Pupils
Teachers
Citizens' committees on education
Education professors
State Board of Education
My first training teacher
Commercial producers of teaching machines and programmed instruction
Professional teachers' associations
Teachers' unions
Parents of pupils
Curriculum guides
School clerks
School rules
Consultants and/or special supervisors

Scales

believable--unbelievable
unreliable--reliable
stubborn--reasonable
correct--incorrect
unimportant--valuable
exciting--dull
safe--dangerous
complex--simple
wrong--right
strong--helpless
devoted--unconcerned
unpredictable--predictable
wise--foolish
impulsive--restrained
accurate--inaccurate

APPENDIX V

As the instructions on the form below indicate, an attempt was made to force each subject to give a rectangular distribution of choices across the full range of the sociometric scale. Numbers rather than names were used to preserve the anonymity of the subjects. Because names were not used, it is hoped that the responses of the subjects can be interpreted as more nearly reflecting actual perceptions than would be the case had names been used.

Please refer to the code list to answer the question below. Indicate all persons by the appropriate number only.

DO NOT WRITE ANY NAMES

Use the scale below to group the members of your school staff according to how easy it is for you personally to work with them. Divide the staff into 6 groups, ranging from those easiest to work with to those hardest to work with, even though you may feel that you can really work well with everyone.

Put approximately the same number of persons in each group. Be sure you list everyone except yourself. USE CODE NUMBERS ONLY.

Easiest people
to work with ______________________________

↕ ______________________________

____

____

____

Hardest people ______________________________
to work with

APPENDIX VI

BACKGROUND INFORMATION

Age: ________________________ **Sex**___ **Grade now teaching**__
20-30 30-40 40-50 50-60

Years of experience as a teacher____________________

Other grades taught previously____________________

Years of experience as a supervisor____________________

Years of experience in school administration__________

Years of experience in present school______________

Number of other schools worked in____________________

APPENDIX VII

Samples of Impressionistic Accounts of Schools

School DA

Principal very cooperative and friendly. Very young. Staff gets along well together, easy with Principal. But staff somewhat suspicious--especially one man and two women. Man commented that answers might reflect on teaching as profession. Women very flippant in resistance to ranking.

Conditions for testing rather poor--crowded into lounge, hard for all to see chalkboard.

School DI

Principal cooperative but did not seem to be very close to staff. Didn't seem to know what to do. No response to unrest of some staff members.

Staff not easy. Several refusals--one outspoken, several quiet--when came to ranking sheet. Several talked a lot but not specifically. Whispering and talking together during instructions. One woman left after first part because "didn't like that," but asked of second, "Do I have to?" Felt hostility but little expressed frankly.

Crowded lounge.

School DK

Principal very cooperative and businesslike. Had feeling of excellent preparation with staff. Whole staff present and totally serious, friendly, task-oriented. Best response so far.

Lounge adequate in size with tables.

School NB

Principal extremely cooperative and interested and task-oriented. Whole group was assembled and waiting by 8:05. All completed first part within 15 minutes. Absolutely no questions, no indication of any fear or ill-feeling. Just did the jobs. Principal did not joke with staff but seemed very easy and was not sober-faced either about the whole thing. Principal wanted to know if I would like to include secretary and custodian (I declined).

Typist: Dorothy Fialkoff
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Los Angeles 64, Calif.
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